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PATENT NUMBER- 04933324

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**1. RECEPTOR STIMULATED RELEASE OF TAURINE BY GLIAL CELLS IN CULTURE**

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SHAIN, W.; SMITH, K. L.; MARTIN, D. L.

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**AUTHOR AFFILIATION-** LAB. NEUROTOXICOL. AND NEUROLOGICAL DISORDERS, CENT. LAB. AND RES., ALBANY, N.Y. 12201.

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**CONFERENCE TITLE-** 23RD ANNUAL MEETING OF THE AMERICAN SOCIETY FOR CELL BIOLOGY

**CONFERENCE LOCATION-** SAN ANTONIO, TEX., USA

**LANGUAGE-** English

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**2. THE TRANSVERSE SLICE OF HIPPOCAMPUS AS A BIOASSAY FOR NEUROACTIVE MATERIALS**

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RICHARDS, C. D.

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ROWLAND HILL ST., LONDON NW3 2PF.

LITERARY INDICATOR(S)- ABSTRACT

SUBFILE- BR (Biological Abstracts)

CONFERENCE TITLE- PROCEEDINGS OF THE PHYSIOLOGICAL SOCIETY  
(ROYAL FREE HOSPITAL MEETING)

LANGUAGE- English

NO-ABSTRACT

DESCRIPTOR(S)- \*APPLICATION; \*ARACHNOID; \*CELL; \*COMPUTER;  
\*DENTATE; \*ELECTRO; \*GRANULE; \*GUINEA-PIG; \*GYRUS; \*LAYER;  
\*MEMBRANE; \*PHYSIOLOGY; \*PIA

BIOSIS Concept Code(s)- 20501; 20504

BIOSYSTEMATIC CODES- 86300

Secondary Concept Code(s)- 00520; 00530; 10060; 10504; 20502; 32600 .

---

### 3. METABOLIC AND FUNCTIONAL STUDIES ON POST MORTEM HUMAN BRAIN

BO1 BR 26-00 BR 26-039181 NDN- 136-0137-5753-8

HARDY, J. A.; DODD, P. R.

ABBREVIATED JOURNAL TITLE- NEUROCHEM INT  
VOL. 5

NO. 3

1983

253-266 page(s)

CODEN- NEUID

AUTHOR AFFILIATION- MRC NEUROENDOCRINOL. UNIT, NEWCASTLE  
GEN. HOSP., NEWCASTLE UPON TYNE, NE4 6BE, U.K.

LITERARY INDICATOR(S)- REVIEW

SUBFILE- BR (Biological Abstracts)

LANGUAGE-

English

NO-ABSTRACT

DESCRIPTOR(S)- \*BRAIN; \*DISORDERS; \*DRUGS; \*ENZYMES; \*  
NEUROACTIVE ; \*NUCLEIC-ACIDS; \*RECEPTORS  
BIOSIS Concept Code(s)- 02508; 10508; 10808; 12510; 13014; 20504; 20506; 22024  
BIOSYSTEMATIC CODES- 86215  
Secondary Concept Code(s)- 10062; 32600 .

---

**4. STRUCTURE OF COMPLEMENT DNA CLONES FOR PRECURSORS TO  
NEUROACTIVE PEPTIDES FROM THE ATRIAL GLAND OF THE MOLLUSK  
APLYSIA**

BO1 BR 26-00 BR 26-037872 2105 NDN- 136-0137-4444-1

ROACH, A. H.; CHIN, S.; HOOD, L. E.; STRUMWASSER, F.

ABBREVIATED VOL.	JOURNAL	TITLE-	FED	PROC
NO.		42		
1983		7		

CODEN- FEPRA

AUTHOR AFFILIATION- DIV. BIOL., CALIF. INST. TECHNOL., PASADENA,  
CA 91125.

LITERARY	INDICATOR(S)-	ABSTRACT
SUBFILE- BR	(Biological	Abstracts)
CONFERENCE	DATE- JUNE	5-9, 1983
CONFERENCE	TITLE- 74TH ANNUAL MEETING OF THE AMERICAN SOCIETY OF BIOLOGICAL CHEMISTS	
CONFERENCE	LOCATION- SAN FRANCISCO, CALIF., USA	
LANGUAGE-	English	

NO-ABSTRACT

DESCRIPTOR(S)- \*DNA; \*EGG; \*LAYING; \*RNA; \*SEQUENCE  
BIOSIS Concept Code(s)- 03506; 10300; 13012; 13014; 16504; 17020; 20504; 64026  
BIOSYSTEMATIC CODES- 61200  
Secondary Concept Code(s)- 00520; 07517; 10052; 10062; 10064; 64210 .

---

**5. EFFECTS OF SOME NEUROACTIVE SUBSTANCES ON VENTILATION IN**

**NEW**                    **BORN**                    **RABBITS**  
BO1            BR            26-00            BR            26-033299 NDN-            136-0136-9871-6

YAMAMOTO, Y.; LAGERCRANTZ, H.; FREDHOLM, B.; VON, EULER C.

**ABBREVIATED JOURNAL TITLE-** ACTA PHYSIOL SCAND SUPPL

**NO.**                    508

REYKJAVIK,                    &(ICELAND&)                    1982

34                            page(s)

**CODEN-**                    APSSA

**AUTHOR AFFILIATION-** NOBEL INST. NEUROPHYSIOL., KAROLINSKA  
INST.,                            STOCKHOLM,                    SWEDEN.

**LITERARY INDICATOR(S)-** ABSTRACT

**SUBFILE-**                    BR                            (Biological                    Abstracts)

**CONFERENCE TITLE-** 17TH SCANDINAVIAN CONGRESS OF PHYSIOLOGY  
AND                            PHARMACOLOGY

**LANGUAGE-**                    English

NO-ABSTRACT

**DESCRIPTOR(S)-** \*ADENOSINE; \*AMINOPHYLLINE; \*FLUOROPHENYL;  
\*HORMONE-DRUG; \*INTESTINAL; \*NALOXONE; \*P; \*PEPTIDE;  
\*PHENYLISOPROPYL; \*POLY; \*SUBSTANCE; \*THEOPHYLLINE; \*TRH;  
\*VASOACTIVE;                    \*6-N-L-2;                    \*8

**BIOSIS Concept Code(s)-** 16004; 17020; 20504; 22016; 22024; 22030

**BIOSYSTEMATIC CODES-**                    26845;                    86040

**Secondary Concept Code(s)-** 00520; 10060; 10062; 10064; 17002; 17014; 25000;  
51522; 54000 .

---

**6. NEUROACTIVE AMINO-ACIDS INFLUENCE GONADOTROPIN OUTPUT  
BY A SUPRAPITUITARY MECHANISM IN EITHER RODENTS OR  
PRIMATES**

BO1            BR            26-00            BR            26-009388 NDN-            136-0134-5960-6

TAL,            J.;            PRICE,            M.            T.;            OLNEY,            J.            W.

**ABBREVIATED JOURNAL**                    **TITLE-**                    **BRAIN**                    **RES**

**VOL.**                            273

**NO.**                            1

1983

179-182                            page(s)

**CODEN-**                            BRREA

**AUTHOR AFFILIATION-** DEP. PSYCHIATRY, WASHINGTON UNIV. SCH. MED., ST. LOUIS, MO 63110, USA.  
**SUBFILE-** BR (Biological Abstracts)  
**LANGUAGE-** English

NO-ABSTRACT

**DESCRIPTOR(S)-** \*AMINO; \*ASPARTATE; \*BUTYRIC-ACID; \*GAMMA; \*GLUTAMATE; \*HORMONE; \*LUTEINIZING; \*METABOLIC-DRUG; \*METHYL; \*MONKEY; \*N; \*PHARMACOLOGICAL; \*RAT; \*TOOL  
**BIOSIS Concept Code(s)-** 13012; 17006; 17012; 17014; 17020; 20502; 20504; 22003; 22024; 32500  
**BIOSYSTEMATIC CODES-** 86190; 86375  
**Secondary Concept Code(s)-** 10052; 10062; 10064; 10068; 32600

---

**7. BIOCHEMICAL EVIDENCE OF A NEUROACTIVE ROLE FOR PROLINE IN MAMMALIAN BRAIN**

BO1 BR 26-00 BR 26-004232 1474 NDN- 136-0134-0804-0

RHOADS, D. E.; PETERSON, N. A.; RAGHUPATHY, E.

**ABBREVIATED JOURNAL** **TITLE-** FED **PROC**  
**VOL.** 42  
**NO.** 7  
1983

**CODEN-** FEPRA

**AUTHOR AFFILIATION-** UCSF, BRAIN-BEHAVIOR RES. CTR., SONOMA DEVELOPMENTAL CTR., ELDRIDGE, CA 95431.

**LITERARY INDICATOR(S)-** ABSTRACT  
**SUBFILE-** BR (Biological Abstracts)  
**CONFERENCE DATE-** JUNE 5-9, 1983  
**CONFERENCE TITLE-** 74TH ANNUAL MEETING OF THE AMERICAN SOCIETY OF BIOLOGICAL CHEMISTS  
**CONFERENCE LOCATION-** SAN FRANCISCO, CALIF., USA  
**LANGUAGE-** English

NO-ABSTRACT

**DESCRIPTOR(S)-** \*NALOXONE; \*RAT  
**BIOSIS Concept Code(s)-** 13012; 17020; 20504; 22003  
**BIOSYSTEMATIC CODES-** 26515; 86375  
**Secondary Concept Code(s)-** 00520; 10060; 10064; 10066; 10069; 10506; 10508; 13010; 51522; 54000

---

**8. MODIFICATION OF THE PIGMENT SCREENING OF THE FROG RANA-ESCULENTA RETINA FOLLOWING ADMINISTRATION OF NEUROACTIVE DRUGS**

BO1 BA 77-00 BA 77-080189 NDN- 136-0132-0257-7

KEMALI, M.; MILICI, N.; KEMALI, D.

ABBREVIATED VOL.	JOURNAL	TITLE-	EXP	EYE	RES
NO.		37			
1983;	(RECD.	5	1984)		
493-498		page(s)			
<b>CODEN-</b>		EXERA			
<b>AUTHOR AFFILIATION-</b> INST. CIBERNETICA, 80072 ARCO FELICE, NAPLES, ITALY.					
<b>SUBFILE-</b>	BA	(Biological		Abstracts)	
<b>LANGUAGE-</b>		English			

NO-ABSTRACT

**DESCRIPTOR(S)-** \*ADAPTATION; \*AMPHETAMINE; \*BROMO; \*CYCLIC; \*DARK; \*HALLUCINOGEN; \*LIGHTING; \*LISURIDE; \*LSD; \*LYSERGIC-ACID; \*MESCALINE; \*2

**BIOSIS Concept Code(s)-** 07003; 10604; 13012; 20006; 20506; 22024; 22026; 22504

**BIOSYSTEMATIC CODES-** 25710; 85306

**Secondary Concept Code(s)-** 07200; 10060; 10064; 21003; 51522; 54000

---

**9. TOPOGRAPHIC APPROACHES IN HUMAN QUANTITATIVE PHARMACO ELECTRO ENCEPHALOGRAPHY**

BO1 BA 77-00 BA 77-030097 NDN- 136-0127-0165-3

SANNITA, W. G.; OTTONELLO, D.; PERRIA, B.; ROSADINI, G.; TIMITILLI, C.

ABBREVIATED VOL.	JOURNAL	TITLE-	NEUROPSYCHOBIOLOGY
NO.		9	
1983		1	
66-72		page(s)	
<b>CODEN-</b>		NPBYA	
<b>AUTHOR AFFILIATION-</b>	CATTEDRA	NEUROFISIOPATOLOGIA,	UNIV.

GENOVA, OSPEDALE S. MARTINO, I-16132 GENOVA, ITALY.  
SUBFILE- BA (Biological Abstracts)  
LANGUAGE- English

NO-ABSTRACT

**DESCRIPTOR(S)-** \*AMPLITUDE; \*ANALYSIS; \*CENTRAL; \*COMPOUNDS;  
\*DEPRESSANT; \*DOXEFAZEPAM; \*EFFECTS; \*ELECTRO;  
\*ENCEPHALOGRAPHIC; \*ETHOSUXIMIDE; \*HUMAN; \* **NEUROACTIVE**;  
\*POWER; \*QUANTITATIVE; \*SAS-643; \*SPECTRAL; \*UCB-6474; \*VALPROIC-  
ACID

**BIOSIS Concept Code(s)-** 20504; 22003; 22024

**BIOSYSTEMATIC CODES-** 86215

**Secondary Concept Code(s)-** 10060; 10504; 11304; 13002; 20501 .

---

**10. EVIDENCE FOR A **NEUROACTIVE** COMPONENT IN THE TOXIC  
EXTRACT FROM GONYAULAX-MONILATA**

BO1 BA 77-00 BA 77-007587 NDN- 136-0124-7655-4

BASS, E. L.; KUVSHINOFF, B. W.

**ABBREVIATED JOURNAL TITLE-** COMP BIOCHEM PHYSIOL C COMP  
PHARMACOL

**VOL.** 75

**NO.** 1

1983

131-134 page(s)

**CODEN-** CBPCB

**AUTHOR AFFILIATION-** DEP. BIOL., UNIV. MD., PRINCESS ANNE, MD 21853,  
USA.

**SUBFILE-** BA (Biological Abstracts)

**LANGUAGE-** English

NO-ABSTRACT

**DESCRIPTOR(S)-** \*FROG; \*NERVE; \*RED; \*SCIATIC; \*TIDE

**BIOSIS Concept Code(s)-** 07506; 07508; 20506; 22506

**BIOSYSTEMATIC CODES-** 14500; 35200; 85306

**Secondary Concept Code(s)-** 07512; 07517; 10060; 37015; 64002 .

---

11. PHARMACOLOGICAL SCREENING OF THE NUDE MOUSE WITH  
RESPECT TO SOME **NEUROACTIVE DRUGS**  
BO1 BR 25-00 BR 25-073406 NDN- 136-0123-8474-0

WASSERMANN, K.

ABBREVIATED JOURNAL TITLE- ACTA PHARMACOL TOXICOL  
VOL. 52  
NO. 2  
1983  
155-157 page(s)  
CODEN- APTOA  
AUTHOR AFFILIATION- DEPARTMENT OF PHARMACOLOGY, ROYAL  
DANISH SCHOOL OF PHARMACY, 2 UNIVERSITETSPARKEN, DK-2100  
COPENHAGEN 0, DENMARK.  
SUBFILE- BR (Biological Abstracts)  
LANGUAGE- English

NO-ABSTRACT

DESCRIPTOR(S)- \*AMITRIPTYLINE; \*ANALGESIA; \*ANTI; \*APO;  
\*CONVULSIVE; \*DIAZEPAM; \*ELECTRO; \*HOT; \*MORPHINE; \*NOCICEPTIVE;  
\*PLATE; \*REACTION; \*RESPONSE; \*SEIZURE; \*SHOCK; \*THYMOLEPTIC;  
\*TIME

BIOSIS Concept Code(s)- 07003; 20504; 21003; 22002; 22024; 22026  
BIOSYSTEMATIC CODES- 26515; 86375

Secondary Concept Code(s)- 03506; 10010; 10060; 11314; 17016; 18501; 22100;  
51522; 54000 .

---

12. CONSTRUCTION AND PERFORMANCE OF A SOLID PHASE EDMAN  
CHEMISTRY BASED MICRO SEQUENCER  
BO1 BR 25-00 BR 25-050153 1822 NDN- 136-0121-5221-9

HAWKE, D.; SHIVELY, J. E.

ABBREVIATED JOURNAL TITLE- FED PROC  
VOL. 42  
NO. 7  
1983  
CODEN- FEPRA

AUTHOR AFFILIATION- CITY HOPE RES. INST., DURATE CALIF. 91010.

LITERARY INDICATOR(S)- ABSTRACT

**SUBFILE-** BR (Biological Abstracts)  
**CONFERENCE DATE-** JUNE 5-9, 1983  
**CONFERENCE TITLE-** 74TH ANNUAL MEETING OF THE AMERICAN  
SOCIETY OF BIOLOGICAL CHEMISTS  
**CONFERENCE LOCATION-** SAN FRANCISCO, CALIF., USA  
**LANGUAGE-** English

NO-ABSTRACT

**DESCRIPTOR(S)-** \*APLYSIA; \* **NEUROACTIVE**; \*PEPTIDES  
**BIOSIS Concept Code(s)-** 10054; 10506; 10511; 17020; 20504; 64026  
**BIOSYSTEMATIC CODES-** 61200  
**Secondary Concept Code(s)-** 00520; 10064 .

---

**13. ELECTRO PHYSIOLOGICAL STUDIES ON THE **NEUROACTIVE**  
PROPERTIES OF NEUROTENSIN**  
BO1 BR 25-00 BR 25-035196 NDN- 136-0120-0264-7

HENRY, J. L.

NEMEROFF, C. B. AND A. J. PRANGE, JR. (ED.). ANNALS OF THE NEW YORK ACADEMY OF SCIENCES, VOL. 400. NEUROTENSIN, A BRAIN AND GASTROINTESTINAL PEPTIDE; CONFERENCE, NEW YORK, N.Y., USA, MARCH 24-26, 1982. IX+444P. NEW YORK ACADEMY OF SCIENCES: NEW YORK, N.Y., USA. ILLUS. PAPER.

1982; (RECD. 1983)

P216-227 page(s)

**ISBN-** 0-89766-191-5(PAPER); 0-89766-190-7(CLOTH).

**CODEN-** ANYAA

**AUTHOR AFFILIATION-** DEPARTMENT OF RESEARCH IN ANAESTHESIA, PHYSIOLOGY AND PSYCHIATRY, MCGILL UNIVERSITY, MONTREAL, QUEBEC, CANADA H3G 1Y6.

**SUBFILE-** BR (Biological Abstracts)

**LANGUAGE-** English

NO-ABSTRACT

**DESCRIPTOR(S)-** \*CAT; \*CENTRAL; \*NERVOUS; \*SYNAPTIC; \*SYSTEM; \*TRANSMISSION  
**BIOSIS Concept Code(s)-** 17002; 17020; 20504  
**BIOSYSTEMATIC CODES-** 85770  
**Secondary Concept Code(s)-** 00520; 10064; 20501 .

---

**14. ALCOHOL AS A PRECURSOR OR MODULATION OF NEUROACTIVE AGENTS**

BO1 BR 25-00 BR 25-006079 NDN- 136-0117-1147-0

DEITRICH, R. A.

**ABBREVIATED JOURNAL TITLE-** ALCOHOL CLIN EXP RES  
**VOL.** 5  
**NO.** 3  
1981; (RECD. 1982)  
455-456 page(s)

**CODEN-** ACRSD

**AUTHOR AFFILIATION-** DEP. OF PHARMACOL., UNIV. OF COLO. SCH. OF MED.

**SUBFILE-** BR (Biological Abstracts)  
**CONFERENCE** DATE- NOV. 26-27, 1979

**CONFERENCE TITLE-** PROCEEDINGS OF THE CONFERENCE ON GENETIC AND BIOCHEMICAL VARIABILITY IN RESPONSE TO ALCOHOL

**CONFERENCE LOCATION-** BALTIMORE, MD., USA

**LANGUAGE-** English

NO-ABSTRACT

**DESCRIPTOR(S)-** \*ALDEHYDE; \*BETA; \*CARBOLINES; \*HYDRO;  
\*PAPOVEROLINE; \*SALSOLINOL; \*TETRA; \*TOXICITY  
**BIOSIS Concept** **Code(s)-** 13002; 22024; 22501  
**BIOSYSTEMATIC CODES-** 85700  
Secondary Concept Code(s)- 00520; 07004; 10060; 21004 .

---

**15. PHYSIOLOGICAL ACTIVITY OF THE NEUROACTIVE SUBSTANCE RELEASED INTO COCKROACH BLOOD BY THE ACTION OF HEPTACHLOR**

BO1 BA 76-00 BA 76-080700 NDN- 136-0115-3260-4

RAO, A. P.

**ABBREVIATED JOURNAL TITLE-** ENTOMON  
**VOL.** 7  
**NO.** 4  
1982; (RECD. 1983)

423-426 page(s)  
**CODEN-** ENTOD  
**AUTHOR AFFILIATION-** DEP. ZOOL., UNIV. COLL., KAKATIYA UNIV.,  
WARANGAL, INDIA 506 009.  
**SUBFILE-** BA (Biological Abstracts)  
**LANGUAGE-** English

NO-ABSTRACT

**DESCRIPTOR(S)-** \*ATROPINE; \*ESERINE; \*INSECTICIDE; \*NICOTINE;  
\*PERIPLANETA-AMERICANA  
**BIOSIS Concept Code(s)-** 13002; 14506; 20506; 22501; 60012; 64078  
**BIOSYSTEMATIC CODES-** 26260; 26775; 75340  
**Secondary Concept Code(s)-** 10060; 15001; 22010; 22024; 51522; 54000; 54600 .

---

**16. PRESSURE EJECTION SYSTEM FOR QUANTITATIVE FOCAL  
APPLICATION OF NEUROACTIVE SUBSTANCES FROM MICRO PIPETTES**

BO1 BA 76-00 BA 76-059759 NDN- 136-0113-2319-5  
SMITH, T. G.,JR; CUNNINGHAM, M. F.  
**ABBREVIATED JOURNAL TITLE-** MED BIOL ENG COMPUT  
**VOL.** 21  
**NO.** 2  
1983  
138-144 page(s)  
**CODEN-** MBECD  
**AUTHOR AFFILIATION-** LAB. NEUROPHYSIOLOGY, NINCDS BUILDING 36,  
ROOM 2C-02, NATIONAL INST. HEALTH, BETHESDA, MD. 20205, USA.  
**SUBFILE-** BA (Biological Abstracts)  
**LANGUAGE-** English

NO-ABSTRACT

**DESCRIPTOR(S)-** \*DELIVERY; \*DRUG; \*SYSTEM  
**BIOSIS Concept Code(s)-** 20504; 22024  
**BIOSYSTEMATIC CODES-** 85150  
**Secondary Concept Code(s)-** 02506; 10060; 10504; 10506; 10508; 32500 .

---

**17. IMMUNO CYTOCHEMICAL AND AUTO RADIOGRAPHIC METHODS TO  
DEMONSTRATE THE COEXISTENCE OF ~~NEUROACTIVE~~ SUBSTANCES  
CEREBELLAR PURKINJE CELLS HAVE GLUTAMIC-ACID  
DECARBOXYLASE AND MOTILIN IMMUNO REACTIVITY AND RAPHE  
NEURONS HAVE SEROTONIN AND SUBSTANCE P IMMUNO REACTIVITY**

BO1 BR 24-00 BR 24-066215 NDN- 136-0106-3775-3

CHAN-PALAY,

V.

CHAN-PALAY, V. AND S. L. PALAY (ED.). NEUROLOGY AND  
NEUROBIOLOGY, VOL. 1. CYTOCHEMICAL METHODS IN NEUROANATOMY.  
MEETING, BETHESDA, MD., JUNE 10-12, 1981. XVI+568P. ALAN R. LISS, INC.:  
NEW YORK, N.Y., USA. ILLUS.

1982

P93-118 page(s)

ISBN- 0-8451-2700-4.

CODEN- NEUND

**AUTHOR AFFILIATION-** DEP. NEUROBIOL., HARVARD MED. SCH., BOSTON,  
MASS. 02115.

**SUBFILE-** BR (Biological Abstracts)  
**LANGUAGE-** English

NO-ABSTRACT

**DESCRIPTOR(S)-** \*ACETYL; \*AMINO; \*BUTYRIC-ACID; \*CELLS; \*CHOLINE;  
\*GAMMA; \*METHODS; \*MICROSCOPY; \*NOREPINEPHRINE; \*PEROXIDASE;  
\*PURKINJE; \*RAT

**BIOSIS Concept Code(s)-** 02506; 10508; 10804; 10808; 13012; 17014; 17020; 20502;  
20504; 25508; 34502

**BIOSYSTEMATIC CODES-** 86375

**Secondary Concept Code(s)-** 00520; 01012; 01052; 01058; 06504; 10064; 10065;  
10504; 11108 .

---

**18. RECOMBINANT DNA APPROACH TO NEURO GENETIC DISORDERS**

BO1 BR 24-00 BR 24-039942 NDN- 136-0103-7502-3

HOUSMAN, D.; KIDD, K.; GUSELLA, J. F.

**ABBREVIATED JOURNAL TITLE-** TRENDS NEUROSCI  
**VOL.** 5  
**NO.** 9  
1982

320-323 page(s)  
CODEN- TNSCD  
AUTHOR AFFILIATION- DEP. BIOL., MIT, CAMBRIDGE, MASS. 02139, USA.  
SUBFILE- BR (Biological Abstracts)  
LANGUAGE- English

NO-ABSTRACT

DESCRIPTOR(S)- \*CODING; \*DISEASE; \*DNA; \*GENETIC; \*HUMAN;  
\*HUNTINGTONS; \*LINKAGE; \* NEUROACTIVE; \*PEPTIDE; \*POLY;  
\*SEQUENCE  
BIOSIS Concept Code(s)- 03508; 10062; 10506; 13012; 20506  
BIOSYSTEMATIC CODES- 86215  
Secondary Concept Code(s)- 10052; 10064; 20501

---

19. HIGH PERFORMANCE LIQUID CHROMATOGRAPHY FLUORESCENCE  
ANALYSIS OF NEUROACTIVE AMINO-ACIDS IN BRAIN  
BO1 BR 24-00 BR 24-036394 NDN- 136-0103-3954-7

FRYE, G.

ABBREVIATED JOURNAL TITLE- ALCOHOLISM CLIN EXP RES  
VOL. 6  
NO. 1  
1982

141 page(s)  
CODEN- ACRSD

AUTHOR AFFILIATION- CENT. ALCOHOL STUDIES, UNIV. N.C., CHAPEL  
HILL, N.C. 27514.

LITERARY INDICATOR(S)- ABSTRACT  
SUBFILE- BR (Biological Abstracts)  
CONFERENCE DATE- APRIL 2-5, 1982  
CONFERENCE TITLE- 13TH ANNUAL MEDICAL-SCIENTIFIC CONFERENCE  
OF THE NATIONAL ALCOHOLISM FORUM ON PROGRESS IN ALCOHOLISM  
RESEARCH AND TREATMENT  
CONFERENCE LOCATION- WASHINGTON, D.C., USA  
LANGUAGE- English

NO-ABSTRACT

DESCRIPTOR(S)- \*AMINO; \*ASPARTATE; \*BRAIN; \*BUTYRIC-ACID;  
\*CHRONIC; \*CORTEX; \*ETHANOL; \*GAMMA; \*GLUTAMATE; \*GLUTAMINE;  
\*GLYCINE; \*HIPPOCAMPUS; \*MID; \*RAT; \*STEM; \*STRIATUM; \*TAURINE;

\*TREATMENT

BIOSIS Concept Code(s)- 10054; 17020; 20506; 21004; 22501

BIOSYSTEMATIC CODES- 86375

Secondary Concept Code(s)- 00520; 10064; 10504; 12100

---

20. **NEUROACTIVE SUBSTANCES AND PIGMENTARY HARMONY**

BO1 BR 24-00 BR 24-015284 NDN- 136-0101-2844-5

CARTER, R. J.; SHUSTER, S.

ABBREVIATED JOURNAL TITLE- BR J DERMATOL

VOL. 106

NO. 6

1982

737 page(s)

CODEN- BJDEA

AUTHOR AFFILIATION- DEP. DERMATOL., UNIV. NEWCASTLE UPON TYNE  
NEI 4LP.

LITERARY INDICATOR(S)- ABSTRACT

SUBFILE- BR (Biological Abstracts)

CONFERENCE DATE- ENGLAND, JAN. 1982

CONFERENCE TITLE- BRITISH ASSOCIATION OF DERMATOLOGY

INVESTIGATIVE GROUP MEETING

CONFERENCE LOCATION- BRISTOL

LANGUAGE- English

NO-ABSTRACT

DESCRIPTOR(S)- \*ACTION; \*ANOLIS-CAROLINENSIS; \*AUTONOMIC-DRUG;

\*BRAIN; \*CELL; \*CHLORPROMAZINE; \*CLONIDINE; \*HALOPERIDOL;

\*HORMONE-DRUG; \*MSH; \*PERPHENAZINE; \*PIGMENT;

\*PROCHLORPERAZINE; \*TRIFLUOPERAZINE; \*YOHIMBINE

BIOSIS Concept Code(s)- 02506; 10010; 17014; 18504; 20504; 22016; 22024

BIOSYSTEMATIC CODES- 11000; 85408

Secondary Concept Code(s)- 00520; 10060; 10064; 51522; 54000

---

21. **A PROTOCOL FOR MOLECULAR GENETIC NEUROSCIENCE**

BO1 BR 24-00 BR 24-014843 NDN- 136-0101-2403-8

SCHMITT, F. O.

SCHMITT, F. O., S. J. BIRD AND F. E. BLOOM (ED.). MOLECULAR GENETIC NEUROSCIENCE. XX+492P. RAVEN PRESS: NEW YORK, N.Y., USA. ILLUS.

1982

P1-10 page(s)  
ISBN- 0-89004-744-8.

NUMBEN- 13907

**AUTHOR AFFILIATION-** NEUROSCIENCES RESEARCH PROGRAM, JAMAICA PLAIN, MASS. 02130.

**SUBFILE-** BR (Biological Abstracts)  
**LANGUAGE-** English

NO-ABSTRACT

**DESCRIPTOR(S)-** \*BRAIN; \*CHEMICAL; \*CIRCUITRY; \*NEURO; \*

**NEUROACTIVE** [REDACTED]; \*PARACRINE; \*SUBSTANCES

**BIOSIS** Concept Code(s)- 03506; 17020; 20504

**BIOSYSTEMATIC CODES-** 85150 .

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**22. LEVELS OF NEUROACTIVE SUBSTANCES FOLLOWING EXPOSURE TO**  
**METHYL METHACRYLATE MONOMER**

BO1 BR 24-00 BR 24-006001 NDN- 136-0100-3561-3

WYNKOOP, J. R., II; MILLER, R. A.; CHEONG, V.; LORTON, L.

**ABBREVIATED JOURNAL TITLE-** J DENT RES

**VOL.** 61

**NO.** SPEC. ISSUE

1982

202 page(s)

**CODEN-** JDREA

**AUTHOR AFFILIATION-** U.S. ARMY INST. OF DENTAL RES., WASHINGTON, D.C.

**LITERARY INDICATOR(S)-** ABSTRACT

**SUBFILE-** BR (Biological Abstracts)

**CONFERENCE DATE-** MARCH 18-21, 1982

**CONFERENCE TITLE-** 60TH GENERAL SESSION OF THE INTERNATIONAL ASSOCIATION FOR DENTAL RESEARCH AND ANNUAL SESSION OF THE AMERICAN ASSOCIATION FOR DENTAL RESEARCH

**CONFERENCE LOCATION-** NEW ORLEANS, LA., USA

**LANGUAGE-** English

NO-ABSTRACT

**DESCRIPTOR(S)-** \*CHOLIN; \*ESTERASE; \*NEURO; \*NOREPINEPHRINE; \*RAT;  
\*TOXICITY

**BIOSIS Concept Code(s)-** 10808; 13012; 17020; 20506; 22501

**BIOSYSTEMATIC CODES-** 86375

**Secondary Concept Code(s)-** 00520; 10060; 10064; 13002 .

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**23. SYNTHESIZING ENZYMES FOR 4 NEUROACTIVE SUBSTANCES IN  
MOTOR NEURONS AND NEURO MUSCULAR JUNCTIONS LIGHT  
MICROSCOPIC AND ELECTRON MICROSCOPIC IMMUNO  
CYTOCHEMISTRY**

BO1 BA 75-00 BA 75-074218 NDN- 136-0097-9270-9

CHAN-PALAY, V.; ENGEL, A. G.; PALAY, S. L.; WU, J-Y.

**ABBREVIATED JOURNAL TITLE-** PROC NATL ACAD SCI U S A  
**VOL.** 79

**NO.** 21

1982

6717-6721 page(s)

**CODEN-** PNASA

**AUTHOR AFFILIATION-** DEP. NEUROBIOL., HARVARD MED. SCH., BOSTON,  
MASS. 02115.

**SUBFILE-** BA (Biological Abstracts)

**LANGUAGE-** English

NO-ABSTRACT

**DESCRIPTOR(S)-** \*ACETYL; \*ALPHA; \*AMINO; \*BUNGARO; \*BUTYRIC-  
ACID; \*CHOLINE; \*CYSTEINESULFINIC-ACID; \*DECARBOXYLASE;  
\*DOPAMINE; \*EC-1.14.16.2; \*EC-2.3.1.6; \*EC-4.1.1.15; \*EC-4.1.1.29; \*GAMMA;  
\*GLUTAMIC-ACID; \*GUINEA-PIG; \*HUMAN; \*HYDROXYLASE; \*MACACA-  
MULATTA; \*MOUSE; \*MUSCLE; \*RAT; \*SKELETAL; \*TAURINE; \*TONGUE;  
\*TOXIN; \*TRANSFERASE; \*TYROSINE

**BIOSIS Concept Code(s)-** 02506; 02508; 10808; 12003; 13012; 17020; 17504; 19002;  
19004; 20504; 34502

**BIOSYSTEMATIC CODES-** 85410; 86205; 86215; 86300; 86375

**Secondary Concept Code(s)-** 01052; 01058; 10060; 10064; 10804; 22501 .

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**24. PITUITARY RESPONSES TO A NEUROACTIVE TRI PEPTIDE TRH IN**

**FRIEDREICH'S**                    **ATAXIA**                    **FAMILIES**  
BO1            BA      75-00            BA      75-063960 NDN-      136-0096-9012-3

TOLIS, G.; MEHTA, A.; ANDERMANN, E.; HARVEY, C.; BARBEAU, A.

ABBREVIATED JOURNAL TITLE- CAN J NEUROL SCI

VOL. 9

NO. 2

1982

189-1

**CODEN**

page(s)

**AUTHOR AFFILIATION-** CLINICAL RES. INST. OF MONTREAL, 110 WEST

PINE AVE MONTREAL QUEBEC CANADA H2W 1R7

**SUBFILE- BA (Biological Abstracts)**

LANGUAGE- English

## NO-ABSTRACT

**DESCRIPTOR(S)-** \*GLUCOSE; \*GROWTH; \*HORMONE; \*HORMONE-DRUG;  
\*HUMAN; \*IMPAIRED; \*PROLACTIN; \*THERAPY; \*THYROID;  
\*THYROTROPIN; \*TOLERANCE

**BIOSIS Concept Code(s)-** 03508; 10006; 12512; 13004; 13012; 17014; 17018; 17020; 20506; 22016; 22024

**BIOSYSTEMATIC CODES- 86215**

**Secondary Concept Code(s)-** 10064; 10068; 10069; 13010; 19001; 22003; 22005; 22100 .

## 25. STANDARDIZATION VS. NORMALIZATION IN THE POWER SPECTRAL ANALYSIS OF THE ELECTRO ENCEPHALOGRAPHIC SIGNAL

BO1 BA 75-00 BA 75-058830 NDN- 136-0096-3882-4

BALESTRA, V.; CABRI, M.; PADOVAN, C.; SANNITA, W. G.; BALZANI, P.

ABBREVIATED JOURNAL TITLE- BOLL SOC ITAL BIOL SPER  
VOL. 57

NO. 17

1981: (RECD.

1823-1829 page(s)

**CODEN-  
AUTHOR** **AFFILIATION-** CATTEDEA NEUROFISIOPATOLOGIA, UNIV.  
BSIBA

CENTRO NEUROFISIOLOGIA CEREBRALE. C.N.R., GENOVA.

**SUBFILE-** BA (Biological Abstracts)

**LANGUAGE-** English

NO-ABSTRACT

**DESCRIPTOR(S)-** \*COMPOUNDS; \*EPILEPSY; \*HUMAN; \* **NEUROACTIVE**  
**BIOSIS** Concept Code(s)- 12504; 20501; 20504; 20506  
**BIOSYSTEMATIC** **CODES-** 86215  
**Secondary Concept Code(s)-** 04500; 10504; 22024

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**26. REGULATION OF PHOSPHORYLATION OF PROTEINS I III-A AND III-B  
IN RAT NEURO HYPOPHYSIS IN-VITRO BY ELECTRICAL STIMULATION  
AND BY **NEUROACTIVE** AGENTS**

BO1 BA 75-00 BA 75-056380 NDN- 136-0096-1432-7

TSOU, K.; GREENGARD, P.

**ABBREVIATED JOURNAL TITLE-** PROC NATL ACAD SCI U S A

**VOL.** 79

**NO.** 19

1982

6075-6079 page(s)

**CODEN-** PNASA

**AUTHOR AFFILIATION-** DEP. PHARMACOL. III, SHANGHAI INSTITUTE  
MATERIA MEDICA, CHINESE ACADEMY SCIENCES, SHANGHAI, 200031,  
PEOPLE'S REPUBLIC CHINA.

**SUBFILE-** BA (Biological Abstracts)

**LANGUAGE-** English

NO-ABSTRACT

**DESCRIPTOR(S)-** \*AUTONOMIC-DRUG; \*DOPAMINE; \*FLUPHENAZINE;  
\*METABOLIC-DRUG

**BIOSIS** Concept Code(s)- 10508; 17002; 17014; 17020; 20504; 22024

**BIOSYSTEMATIC** **CODES-** 86375

**Secondary Concept Code(s)-** 10062; 10064; 10069; 10506; 10610; 20501; 22003;  
32600

---

**27. THE EFFECTS OF CHLORPROMAZINE AND PHENO BARBITAL ON  
VASCULOGENESIS IN THE CEREBELLAR CORTEX**

BO1 BA 75-00 BA 75-055381 NDN- 136-0096-0433-4

HANNAH, R. S.; ROTH, S. H.; SPIRA, A. W.

**ABBREVIATED JOURNAL TITLE-** ACTA NEUROPATHOL

**VOL.** 57

**NO.** 4

1982

306-308 page(s)

**CODEN-** ANPTA

**AUTHOR AFFILIATION-** DEP. ANAT., FAC. MED., UNIV. CALGARY, CALGARY, ALBERTA T2N 4N1, CAN.

**SUBFILE-** BA (Biological Abstracts)

**LANGUAGE-** English

NO-ABSTRACT

**DESCRIPTOR(S)-** \*CELL; \*DRUGS; \*LAYER; \* **NEUROACTIVE**; \*NEUROGENESIS; \*PURKINJE; \*RAT

**BIOSIS Concept Code(s)-** 14508; 20506; 22024; 22026; 22504; 25503; 25504

**BIOSYSTEMATIC CODES-** 86375

**Secondary Concept Code(s)-** 02506; 07003; 10010; 10060; 10062; 10506; 10508; 12006; 21003; 25000 .

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**28. PHOSPHONIC ANALOGS OF **NEUROACTIVE** BIO MOLECULES**

BO1 BR 23-00 BR 23-003945 NDN- 136-0083-8989-0

DE TINGUY-MOREAUD, E.; BIOULAC, B.; NEUZIL, E.

**ABBREVIATED JOURNAL TITLE-** BIOCHEM SOC TRANS

**VOL.** 9

**NO.** 3

1981

246-247 page(s)

**CODEN-** BCSTB

**AUTHOR AFFILIATION-** LAB. BIOCHIM. MED., UER III SCI. MED., GROUPE MOTRICITE, UNIV. BORDEAUX II, 146 LEO-SAINAT, 33076 BORDEAUX CEDEX, FR.

**SUBFILE-** BR (Biological Abstracts)

**CONFERENCE DATE-** JAN. 7-9, 1981

**CONFERENCE TITLE-** 593RD MEETING OF THE BIOCHEMICAL SOCIETY OF LONDON

**CONFERENCE LOCATION-** SOUTHAMPTON, ENGLAND

**LANGUAGE-** English

NO-ABSTRACT

**DESCRIPTOR(S)-** \*ANALOG; \*CARBOXYLIC; \*CENTRAL; \*NERVOUS; \*RAT;  
\*SYSTEM

**BIOSIS**      **Concept**      **Code(s)-**      02506;      20504;      22024  
**BIOSYSTEMATIC**      **CODES-**      86375

**Secondary Concept Code(s)-** 10060; 10064; 10506; 20501 .

---

**29. EFFECTS OF NEUROACTIVE PEPTIDES ON GROWTH HORMONE RELEASE**

BO1      BR      23-00      BR      23-001991 NDN-      136-0083-7035-2

SCHOFIELD,      J.      G.

<b>ABBREVIATED</b>	<b>JOURNAL</b>	<b>TITLE-</b>	<b>PROC</b>	<b>NUTR</b>	<b>SOC</b>
<b>VOL.</b>		40			
<b>NO.</b>		3			
1981					
365-366		page(s)			
<b>CODEN-</b>		PNUSA			
<b>AUTHOR</b>	<b>AFFILIATION-</b>	DEP. BIOCHEM.,	UNIV.	BRISTOL.	
<b>SUBFILE-</b>	BR	(Biological	Abstracts)		
<b>CONFERENCE</b>	<b>DATE-</b>	APRIL	8,	1981	
<b>CONFERENCE TITLE-</b> 359TH SCIENTIFIC MEETING OF THE NUTRITION SOCIETY					
<b>CONFERENCE LOCATION-</b> BRISTOL, GLOUCESTERSHIRE, ENGLAND					
<b>LANGUAGE-</b> English					

NO-ABSTRACT

**DESCRIPTOR(S)-** \*CIRCADIAN; \*GASTRIN; \*HUMAN; \*MONKEY;

\*NEUROTENSIN; \*RAT; \*RHYTHM; \*SOMATOSTATIN

**BIOSIS**      **Concept**      **Code(s)-**      07200;      14004;      17002;      17014;      17020

**BIOSYSTEMATIC**      **CODES-**      86190;      86215;      86375

**Secondary Concept Code(s)-** 00520; 10064 .

---

**30. A METHOD FOR LARGE-SCALE PRODUCTION OF MOUSE BRAIN CORTICAL CULTURES**

BO1      BA      74-00      BA      74-062528 NDN-      136-0081-0068-3

SWAIMAN, K. F.; NEALE, E. A.; FITZGERALD, S. C.; NELSON, P. G.

ABBREVIATED VOL.	JOURNAL	TITLE-	DEV	BRAIN	RES
NO.		3			
1982		3			
361-370		page(s)			
CODEN-		DBRRD			
AUTHOR	AFFILIATION-	DIV. PEDIATRIC NEUROL., UNIV. MINNESOTA			
MED.	SCH.,	MINNEAPOLIS, MN	55455,	USA.	
SUBFILE-	BA	(Biological		Abstracts)	
LANGUAGE-		English			

NO-ABSTRACT

DESCRIPTOR(S)- \*ACETYL; \*CHOLINE; \*COMPOUNDS; \* **NEUROACTIVE**; \*TESTS; \*TOXICITY; \*TRANSFERASE  
BIOSIS Concept Code(s)- 02506; 11108; 20501; 20504; 25504; 32500  
BIOSYSTEMATIC CODES- 86375  
Secondary Concept Code(s)- 01054; 10060; 10064; 10804; 22501; 32600

---

31. TOPOGRAPHIC DISTRIBUTION OF QUANTITATIVE ELECTRO  
ENCEPHALOGRAPHIC EFFECTS OF **NEUROACTIVE** DRUGS  
BO1 BR 22-00 BR 22-056833 NDN- 136-0073-4365-1

SANNITA, W. G.; CABRI, M.; GRIS, A.; PADOVAN, C.; ROSADINI, G.

ABBREVIATED NEUROPHYSIOL	JOURNAL	TITLE-	ELECTROENCEPHALOGR	CLIN
VOL.		52		
NO.		3		
1981				
S119-S120		page(s)		
CODEN-		ECNEA		
AUTHOR	AFFILIATION-	GENOA,	ITALY.	
LITERARY	INDICATOR(S)-		ABSTRACT	
SUBFILE-	BR	(Biological	Abstracts)	
CONFERENCE	DATE-	SEPT.	13-18,	1981
CONFERENCE	TITLE-	10TH INTERNATIONAL CONGRESS OF		
CONFERENCE	LOCATION-	KYOTO,	JPN	
LANGUAGE-		English		

NO-ABSTRACT

**DESCRIPTOR(S)-** \*CENTRAL; \*DEPRESSANT; \*DI; \*EPILEPSY;  
\*ETHOSUXIMIDE; \*HUMAN; \*HYDANTOIN; \*PHENYL; \*VALPROIC-ACID  
**BIOSIS Concept Code(s)-** 20501; 20506; 22024  
**BIOSYSTEMATIC CODES-** 86215  
**Secondary Concept Code(s)-** 00520; 10060; 10504; 12004; 12503; 12512; 19001;  
22005; 22100; 25000 .

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**32. MONOGRAPHS IN NEURAL SCIENCES VOL. 7. NEUROBIOLOGY OF CHOLINERGIC AND ADRENERGIC TRANSMITTERS 24TH ANNUAL OHOLO BIOLOGICAL CONFERENCE ON NEUROACTIVE COMPOUNDS AND THEIR CELL RECEPTORS ZICHRON-YA'ACOV ISRAEL APRIL 1-4.**

**1979**

BO1 BR 22-00 BR 22-038681 NDN- 136-0071-6213-9

HELDMAN, E.; LEVY, A.; GUTMAN, Y.; VOGEL, Z.

HELDMAN, E., A. LEVY, Y. GUTMAN AND Z. VOGEL (ED.). MONOGRAPHS IN NEURAL SCIENCES, VOL. 7. NEUROBIOLOGY OF CHOLINERGIC AND ADRENERGIC TRANSMITTERS; 24TH ANNUAL OHOLO BIOLOGICAL CONFERENCE ON NEUROACTIVE COMPOUNDS AND THEIR CELL RECEPTORS, ZICHRON YA'ACOV, ISRAEL, APRIL 1-4, 1979. XV+197P. S. KARGER: BASEL, SWITZERLAND; NEW YORK, N.Y., USA. ILLUS. PAPER. 1980; (RECD. 1981)

PP. XV+197P

ISBN- 3-8055-0828-X.

CODEN- MNUSB

AUTHOR AFFILIATION- ISR. INST. BIOL. RES., NESS-ZIONA.

LITERARY INDICATOR(S)- BOOK

SUBFILE- BR (Biological Abstracts)

LANGUAGE- English

NO-ABSTRACT

**DESCRIPTOR(S)-** \*ANIMAL; \*MEETING  
**BIOSIS Concept Code(s)-** 02506; 13002; 17020; 20504  
**BIOSYSTEMATIC CODES-** 33000  
**Secondary Concept Code(s)-** 00514; 00520; 10060; 17004 .

---

33. **NEUROACTIVE DRUGS OF CHOICE IN SPINAL CORD INJURY A GUIDE FOR USING NEUROLOGICALLY ACTIVE MEDICATIONS IN SPINAL INJURED PATIENTS**

BO1 BR 22-00 BR 22-027365 NDN- 136-0070-4897-5

HALSTEAD, L. S.; CLAUS-WALKER, J.

HALSTEAD, L. S. AND J. CLAUS-WALKER. NEUROACTIVE DRUGS OF CHOICE IN SPINAL CORD INJURY: A GUIDE FOR USING NEUROLOGICALLY ACTIVE MEDICATIONS IN SPINAL INJURED PATIENTS. IX+85P. RAVEN PRESS: NEW YORK, N.Y., USA. ILLUS. PAPER.

1981

PP. IX+85P

ISBN- 0-89004-750-2.

NUMBEN- 11604

**AUTHOR AFFILIATION-** INST. REHABILITATION RES., BAYLOR COLL. MED., HOUSTON, TEX.

**LITERARY INDICATOR(S)-** BOOK

**SUBFILE- (Biological Abstracts)**

**LANGUAGE- English**

NO-ABSTRACT

**DESCRIPTOR(S)-** \*HUMAN

**BIOSIS Concept Code(s)-** 11310; 20506; 22024

**BIOSYSTEMATIC CODES-** 86215

**Secondary Concept Code(s)-** 10010; 10060; 10506; 12512; 22005 .

---

34. **THE BIOCHEMISTRY OF PHOTO RECEPTOR CELLS METABOLIC EFFECTS OF LIGHT STIMULATION AND LIGHT DAMAGE**

BO1 BR 22-00 BR 22-016985 NDN- 136-0069-4517-5

VOADEN, M. J.; MARSHALL, J.; ORAEDU, A. C. I.

ZAUBERMAN, H. (ED.). DOCUMENTA OPHTHALMOLOGICA PROCEEDINGS SERIES, VOL. 25. PROCEEDINGS OF THE CONFERENCE ON SUBRETINAL SPACE, JERUSALEM, ISRAEL, OCT. 14-19, 1979. X+306P. DR. W. JUNK BV PUBLISHERS: THE HAGUE, NETHERLANDS; (DIST. BY KLUWER ACADEMIC PUBLISHERS GROUP: DORDRECHT, NETHERLANDS AND DIST. IN USA BY KLUWER BOSTON, INC.: HINGHAM, MASS., USA). ILLUS.

1981

P107-118 page(s)

**ISBN-** 90-6193-721-3.  
**CODEN-** DOPSB  
**AUTHOR AFFILIATION-** INST. OPHTHALMOL., JUDD ST., LONDON, UK.  
**SUBFILE-** BR (Biological Abstracts)  
**LANGUAGE-** English

NO-ABSTRACT

**DESCRIPTOR(S)-** \*AMINO; \*ASPARTATE; \*BABOON; \*BUTYRATE;  
\*DISTRIBUTION; \*ENZYME; \*GAMMA; \*GLUCOSE; \*GLUTAMATE;  
\*GLUTAMINE; \*GUINEA-PIG; \*METABOLISM; \* **NEUROACTIVE**; \*RAT;  
\*TRITIATED  
**BIOSIS Concept Code(s)-** 02506; 06506; 10010; 10604; 10808; 12003; 13004; 13012;  
20004; 20006  
**BIOSYSTEMATIC CODES-** 86205; 86300; 86375  
**Secondary Concept Code(s)-** 00520; 06504; 10068; 17020; 20504; 32500; 32600 .

---

**35. EFFECT OF **NEUROACTIVE** MATERIAL ON SOME INSECT PESTS**  
BO1 BA 73-00 BA 73-047087 NDN- 136-0063-7115-8

APALE, V. B.; BELSARE, D. K.

**ABBREVIATED JOURNAL TITLE-** INDIAN J EXP BIOL  
VOL. 19

NO. 9

1981

887-890 page(s)

**CODEN-** IJEBA

**AUTHOR AFFILIATION-** SCH. BIOL. SCI., BHOPAL UNIV., BHOPAL 462 026.

**SUBFILE-** BA (Biological Abstracts)

**LANGUAGE-** English

NO-ABSTRACT

**DESCRIPTOR(S)-** \*BRAIN; \*EXTRACT; \*HEMOLYMPH; \*INSECTICIDE;  
\*MALPIGHIAN; \*MUSCA-NEBULO; \*NYMPH; \*PARALYSIS; \*PERIPLANETA-  
AMERICANA; \*POEKILOCERUS-PICTUS; \*SENSITIVITY; \*SUMITHION;  
\*TRICHOPLUSIA-NI; \*TUBULE  
**BIOSIS Concept Code(s)-** 20506; 22501; 54600; 60016; 64078  
**BIOSYSTEMATIC CODES-** 75314; 75330; 75340  
**Secondary Concept Code(s)-** 10060; 12510; 15002; 15506; 25503; 60002 .

**36. THE EFFECTS OF 2 NEUROACTIVE DRUGS ON THE BLOOD VESSEL  
GROWTH IN THE CEREBELLUM**

BO1 BR 21-00 BR 21-043003 NDN- 136-0056-8027-5

HANNAH, R. S.; ROTH, S. H.; SPIRA, A. W.

**ABBREVIATED JOURNAL**

**VOL.** 199

**NO.** 3

1981

106A page(s)

**CODEN-** ANREA

**AUTHOR AFFILIATION-** DEP. ANAT. PHARMACOL., UNIV. CALGARY,  
CALGARY, ALBERTA, CAN.

**LITERARY INDICATOR(S)-** ABSTRACT

**SUBFILE-** BR (Biological Abstracts)

**CONFERENCE DATE-** APRIL 19-23, 1981

**CONFERENCE TITLE-** 94TH SESSION OF THE AMERICAN ASSOCIATION OF  
ANATOMISTS

**CONFERENCE LOCATION-** NEW ORLEANS, LA., USA

**LANGUAGE-** English

NO-ABSTRACT

**DESCRIPTOR(S)-** \*BARBITAL; \*CELL; \*CHLORPROMAZINE; \*NUMBER;  
\*PHENO; \*PURKINJE; \*RAT

**BIOSIS Concept Code(s)-** 14508; 20504; 22010; 22024; 22504

**BIOSYSTEMATIC CODES-** 86375

**Secondary Concept Code(s)-** 00520; 02506; 10010; 10060; 10062; 10506; 12002;  
25508

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**37. PROGRESS IN BIOCHEMICAL PHARMACOLOGY VOL. 16.  
ENDOGENOUS PEPTIDES AND CENTRALLY ACTING DRUGS 24TH  
ANNUAL OHLO BIOLOGICAL CONFERENCE ON NEUROACTIVE  
COMPOUNDS AND THEIR CELL RECEPTORS ZICHRON-YA'ACOV ISRAEL**

APRIL 1-4 1979

BO1 BR 21-00 BR 21-008390 NDN- 136-0053-3414-2

LEVY, A.; ET

LEVY, A. ET AL. (ED.). PROGRESS IN BIOCHEMICAL PHARMACOLOGY, VOL.  
16. ENDOGENOUS PEPTIDES AND CENTRALLY ACTING DRUGS; 24TH

ANNUAL OHOLO BIOLOGICAL CONFERENCE ON NEUROACTIVE COMPOUNDS AND THEIR CELL RECEPTORS, ZICHRON YA'ACOV, APRIL 1-4, 1979. XV+159P. S. KARGER: BASEL, SWITZERLAND; NEW YORK, N.Y., USA. ILLUS.

1980

PP.

XV+159P

ISBN-

3-8055-0831-X.

CODEN-

PBPHA

AUTHOR

AFFILIATION- NESS-ZIONA.

LITERARY

INDICATOR(S)- BOOK; MEETING

SUBFILE-

BR (Biological Abstracts)

LANGUAGE-

English

NO-ABSTRACT

BIOSIS Concept Code(s)- 17002; 20504; 22016; 22024  
Secondary Concept Code(s)- 00520; 10060; 10064; 17014; 17020

---

**38. NEUROACTIVE PROPERTIES OF SOME PHOSPHONIC ANALOGS OF NATURAL GUANIDO COMPOUNDS**

BO1 BA 72-00 BA 72-033616 NDN- 136-0047-3632-7

DE TINGUY-MOREAUD, E.; BIOULAC, B.; VINCENT, J-D.; NEUZIL, E.

ABBREVIATED JOURNAL TITLE- GEN PHARMACOL

VOL. 11

NO. 6

1980; (RECD. 1981)

513-520 page(s)

CODEN- GEPHD

AUTHOR AFFILIATION- UNITE NEUROBIOL. COMPORTEMENTS, INSERM U. 176, RUE CAMILLE SAINT-SAENS, 33077 BORDEAUX CEDEX, FR.

SUBFILE- BA (Biological Abstracts)

LANGUAGE- English

NO-ABSTRACT

DESCRIPTOR(S)- \*ALANINE; \*BETA; \*CEREBELLUM; \*CEREBRUM; \*GLUCOCYAMINE; \*GUANIDO; \*GUANIDOETHYL; \*GUANIDOMETHYL; \*METABOLIC-DRUG; \*NEURON; \*PHARMACODYNAMICS; \*PHOSPHONIC-ACID; \*PHOSPHONOMETHYL; \*PROPIONIC-ACID; \*RAT; \*S; \*TAUROCYAMINE; \*THIO; \*UREA; \*2

BIOSIS Concept Code(s)- 20504; 22003; 22024

**BIOSYSTEMATIC**                   **CODES-**                   86375  
**Secondary Concept Code(s)-** 02506; 10060; 10064; 13012; 20501; 22100 .

**39. HYPOTHESIS GENES AND NEUROACTIVE PEPTIDES FROM FOOD AS CAUSE OF SCHIZOPHRENIA**  
BO1 BR 20-00 BR 20-019683 NDN- 136-0039-4695-8

DOHAN, F. C.

COSTA, E. AND M. TRABUCCHI (ED.). ADVANCES IN BIOCHEMICAL PSYCHOPHARMACOLOGY, VOL. 22. NEURAL PEPTIDES AND NEURONAL COMMUNICATION; SYMPOSIUM, GARDONE, ITALY, AUG. 28-SEPT. 1, 1979. XXVI+651P. RAVEN PRESS: NEW YORK, N.Y., USA. ILLUS.

1980

P535-548 page(s)

**ISBN-** 0-89004-375-2.

**CODEN-** ABPYB

**AUTHOR AFFILIATION-** DEP. MOL. BIOL., EAST. PA. PSYCHIATR. INST.,  
PHILADELPHIA, PA. 19129, USA.

## LITERARY INDICATOR(S)- REVIEW

**SUBFILE- BR (Biological Abstracts)**

**LANGUAGE-** English

**NO-ABSTRACT**  
**DESCRIPTOR(S)-** \*BARRIER; \*CEREAL; \*DEFECTIVE; \*GLUTEN; \*GRAIN;  
\*GUT; \*HUMAN; \*MEMBRANE  
**BIOSIS Concept Code(s)-** 07004; 10508; 13216; 13510; 14006; 20506; 21002; 22502  
**BIOSYSTEMATIC CODES-** 86215  
**Secondary Concept Code(s)-** 00520; 02508; 10064; 13224; 13530; 17020; 20501

## 40. REGULATION OF INTESTINAL ION TRANSPORT BY NEUROACTIVE PEPTIDES

BO1 BR 19-00 BR 19-023807 NDN- 136-0025-1309-8

MILLER, R. J.; KACHUR, J.; FIELD, M.; GUANDALINI, S.; SMITH, P. L.

**ABBREVIATED JOURNAL TITLE- J GEN PHYSIOL**  
**VOL. 74**  
**NO. 6**

1979; (RECD. 1980)  
 2A page(s)  
**CODEN-** JGPLA  
**AUTHOR AFFILIATION-** DEP. PHARMACOL., UNIV. CHIC., CHICAGO, ILL., USA.  
**SUBFILE-** BR (Biological Abstracts)  
**CONFERENCE DATE-** SEPT. 23-26, 1979  
**CONFERENCE TITLE-** 33RD ANNUAL MEETING OF THE SOCIETY OF GENERAL PHYSIOLOGISTS  
**CONFERENCE LOCATION-** WOODS HOLE, MASS., USA  
**LANGUAGE-** English

NO-ABSTRACT

**DESCRIPTOR(S)-** \*A-23187; \*AMP; \*AUTONOMIC-DRUG; \*BROMO; \*CARBAMYL; \*CHLORIDE; \*CHOLINE; \*CYCLIC; \*DI; \*E-2; \*ENKEPHALIN; \*ENTERO; \*GUINEA-PIG; \*HORMONE-DRUG; \*INTESTINAL; \*ION; \*IONOPHORE; \*METABOLIC-DRUG; \*METHYL; \*MORPHINE; \*NALOXONE; \*PEPTIDE; \*PHENTOLAMINE; \*PROSTAGLANDIN; \*RABBIT; \*SODIUM; \*SOMATOSTATIN; \*THEOPHYLLINE; \*TOXIN; \*VASOACTIVE; \*16; \*8  
**BIOSIS Concept Code(s)-** 13010; 14004; 17002; 17020; 20504; 22016; 22024  
**BIOSYSTEMATIC CODES-** 04810; 26515; 26845; 86040  
**Secondary Concept Code(s)-** 10060; 10062; 10064; 10066; 10069; 13002; 13006; 13012; 13014; 22003; 22501; 31000; 51522; 54000 .

**41. CLATHRIN BASKETS REQUIREMENTS FOR ASSEMBLY IN-VITRO**  
 BO1 BR 19-00 BR 19-012084 1341 NDN- 136-0023-9586-7

SCHOOK,	W.;	PUSZKIN,	S.	
<b>ABBREVIATED VOL.</b>	<b>JOURNAL</b>	<b>TITLE-</b>	<b>FED</b>	<b>PROC</b>
NO.		39		
1980		6		
<b>CODEN-</b>	FEPRA			
<b>AUTHOR AFFILIATION-</b> PATHOL. DEP., MT. SINAI SCH. MED., 5TH AVE. AND 100TH ST., NEW YORK, N.Y. 10029, USA.				
<b>LITERARY SUBFILE-</b>	<b>INDICATOR(S)-</b>	<b>ABSTRACT</b>		
CONFERENCE	BR (Biological	Abstracts)		
CONFERENCE DATE-	JUNE	1-6,	1980	
<b>CONFERENCE TITLE-</b> 71ST ANNUAL MEETING OF THE AM. SOC. BIOL. CHEM. HELD WITH THE BIOPHYS. SOC.				
<b>CONFERENCE LOCATION-</b>	NEW ORLEANS,	LA.,	USA	

LANGUAGE-

English

NO-ABSTRACT

**DESCRIPTOR(S)-** \*BRAIN; \*CHLORPROMAZINE; \*DRUG;  
\*ELECTROPHORESIS; \*MYOSIN; \* **NEUROACTIVE**; \*SEDIMENTATION;  
\*TROPO; \*VISCOMETRIC  
**BIOSIS Concept Code(s)-** 02506; 10064; 10506; 20504; 22024  
**BIOSYSTEMATIC CODES-** 85150  
**Secondary Concept Code(s)-** 00520; 10054; 10060; 10504; 12100; 32600 .

---

#### 42. ACTIVATION AND INHIBITION OF CEREBRAL PROLIDASE EC-3.4.13.9

BO1 BA 70-00 BA 70-079931 NDN- 136-0022-4933-4

HUI, K-S.; LAJTHA, A.

**ABBREVIATED JOURNAL TITLE-** NEUROCHEM  
**VOL.** 35  
**NO.** 2  
1980  
489-494 page(s)  
**CODEN-** JONRA  
**AUTHOR AFFILIATION-** CENT. NEUROCHEM., ROCKL. RES. INST., WARD'S  
ISL., NEW YORK, N.Y. 10035, USA.  
**SUBFILE-** BA (Biological Abstracts)  
**LANGUAGE-** English

NO-ABSTRACT

**DESCRIPTOR(S)-** \*ACTINOMYCIN; \*ANALOG; \*ANTIPAIN; \*BACITRACIN;  
\*BESTATIN; \*CALF; \*CHYMOSTATIN; \*CYCLO; \*ENZYME; \*HEXIMIDE;  
\*HORMONE; \*HYDROXY; \*INHIBITOR-DRUG; \*LEUPEPTIN; \*METABOLIC-  
DRUG; \*N; \* **NEUROACTIVE**; \*PEPSTATIN; \*PEPTIDE; \*PROLINAMIDE;  
\*PROLYLHISTIDYL; \*PUROMYCIN; \*RELEASING; \*RIFAMPICIN;  
\*STREPTOMYCIN; \*TETRACYCLINE; \*THYROTROPIN; \*UREA  
**BIOSIS Concept Code(s)-** 10806; 10808; 13012; 20504; 22003; 22024  
**BIOSYSTEMATIC CODES-** 85715  
**Secondary Concept Code(s)-** 10050; 10054; 10060; 10062; 10064; 10804; 17002;  
20501; 22016; 38502; 54600 .

---

43. THE SYNTHESIS OF **NEUROACTIVE AMINO-ACIDS** FROM  
RADIOACTIVE GLUCOSE AND GLUTAMINE IN THE RAT RETINA  
EFFECTS OF LIGHT STIMULATION

BO1 BA 70-00 BA 70-068217 NDN- 136-0021-3219-4

VOADEN, M. J.; MORJARIA, B.

ABBREVIATED JOURNAL TITLE- J NEUROCHEM  
VOL. 35

NO. 1

1980

95-99 page(s)

CODEN- JONRA

AUTHOR AFFILIATION- DEP. VISUAL SCI., INST. OPHTHALMOL., JUDD ST.,

LONDON WC1H 9QS, ENGL., UK.

SUBFILE- BA (Biological Abstracts)

LANGUAGE- English

NO-ABSTRACT

DESCRIPTOR(S)- \*AMINO; \*ASPARTATE; \*BUTYRIC-ACID; \*ENERGY;  
\*GAMMA; \*GLUTAMATE; \*SOURCE

BIOSIS Concept Code(s)- 10604; 13004; 13012; 17020; 20004; 20504

BIOSYSTEMATIC CODES- 86375

Secondary Concept Code(s)- 02506; 06504; 10010; 10062; 10064; 10506; 10508;  
13002; 13003; 20001; 20002; 20501; 32600

---

44. SYNTHESIS ENZYMIC DEGRADATION LIOPHILIC PROPERTIES AND  
BIOLOGICAL ACTIVITY OF 2-D ALANINE 5-TERT BUTYL GLYCINE  
ENKEPHALINAMIDE

BO1 BA 70-00 BA 70-066904 NDN- 136-0021-1906-2

FAUCHERE, J-L.; PETERMANN, C.

ABBREVIATED JOURNAL TITLE- HELV CHIM ACTA

VOL. 63

NO. 4

1980

824-831 page(s)

CODEN- HCACA

AUTHOR AFFILIATION- INST. MOLEKULARBIOLOG. BIOPHYS., EIDG. TECH.

HOCHSCH., CH-8093 ZUERICH, SWITZ.

**SUBFILE-** BA (Biological Abstracts)  
**LANGUAGE-** English

NO-ABSTRACT

**DESCRIPTOR(S)-** \*ALANINE; \*ALPHA-TERT; \*BUTYL; \*D; \*GLYCINAMIDE; \*GLYCINE; \*GUINEA-PIG; \*HORMONE-DRUG; \*L-C; \*MOUSE; \*NEUROACTIVE ; \*PHENYL; \*TYROSINE

**BIOSIS Concept Code(s)-** 17002; 17020; 20504; 22002; 22003; 22016; 22024

**BIOSYSTEMATIC CODES-** 86300; 86375

**Secondary Concept Code(s)-** 10010; 10054; 10064; 10504; 10506; 10806; 12100; 20501; 32600 .

---

**45. JAKOB CREUTZFELDT DISEASE ANALYSIS OF ELECTRO ENCEPHALOGRAM AND EVOKED POTENTIALS UNDER BASAL CONDITIONS AND NEUROACTIVE DRUGS**

BO1 BA 69-00 BA 69-011254 NDN- 136-0001-1254-4

ROSSINI, P. M.; CALTAGIRONE, C.; DAVID, P.; MACCHI, G.

**ABBREVIATED JOURNAL TITLE-** EUR NEUROL

**VOL.** 18

**NO.** 4

1979

269-279 page(s)

**CODEN-** EUNEA

**AUTHOR AFFILIATION-** CLIN. NEUROL. UNIV. CATTOL., LARGO A. GEMELLI 8, I-00168 ROME, ITALY.

**SUBFILE-** BA (Biological Abstracts)  
**LANGUAGE-** English

NO-ABSTRACT

**DESCRIPTOR(S)-** \*CENTRAL; \*DEPRESSANT; \*DIAZEPAM; \*DIFFUSE; \*HUMAN; \*METHYLPHENIDATE; \*PIRACETAM; \*PROJECTING; \*SYSTEM

**BIOSIS Concept Code(s)-** 20506; 21002; 22024; 24500

**BIOSYSTEMATIC CODES-** 86215

**Secondary Concept Code(s)-** 07004; 10060; 10504; 12004; 12512; 20501; 22005 .

---

**46. EFFECT OF GAMMA AMINO BUTYRIC-ACID AND OTHER  
NEUROACTIVE AMINO-ACIDS ON THE SPONTANEOUS RELEASE OF  
NORADRENALINE FROM SLICES OF RAT BRAIN FROM THE MESO  
DIENCEPHALIC REGION**

BO2 BR 17-00 BR 17-051935 NDN- 137-0273-9462-6

ARAKELYAN, L. N.; ESAYAN, N. A.

**ABBREVIATED JOURNAL TITLE- BIOL ZH ARM**  
**VOL. 31**  
**NO. 5**  
1978  
491-498 page(s)  
**CODEN- BZARA**  
**SUBFILE- BR (Biological Abstracts)**

NO-ABSTRACT

**DESCRIPTOR(S)- \*NOREPINEPHRINE**  
**BIOSIS Concept Code(s)- 13012; 17020; 20504**  
**BIOSYSTEMATIC CODES- 86375**  
Secondary Concept Code(s)- 10064

---

**47. NEUROACTIVE DRUG INDUCED ALTERATIONS IN PITUITARY TESTIS**

**FUNCTION IN RATS**

BO2 BR 17-00 BR 17-035756 NDN- 137-0272-3283-3

VERMES, I.; VARSZEGI, M.; TELEGDY, G.

**ABBREVIATED JOURNAL TITLE- NEUROSCI LETT**  
**VOL. SUPPL**  
**NO. 1**  
1978  
S287 page(s)  
**CODEN- NELED**  
**LITERARY INDICATOR(S)- ABSTRACT**  
**SUBFILE- BR (Biological Abstracts)**

NO-ABSTRACT

**DESCRIPTOR(S)- \*ALANINE; \*ALPHA; \*CARBAMATE; \*CHLOROPHENYL;  
\*DI; \*DOPA; \*DOPAMINE; \*ETHYL; \*HYDROXY; \*METABOLIC-DRUG;**

\*METHYL-P; \*NOREPINEPHRINE; \*P; \*TESTOSTERONE; \*THIO;  
 \*TRYPTAMINE; \*TRYPTOPHAN; \*TYROSINE; \*5  
**BIOSIS Concept Code(s)-** 17002; 17006; 17014; '20504; 22024  
**BIOSYSTEMATIC CODES-** 86375  
**Secondary Concept Code(s)-** 10060; 10064; 10067; 13008; 13012; 17020; 22003;  
 22016 .

---

**48. EFFECT OF DIFFERENT NEUROACTIVE DRUGS ON PLASMA CATECHOLAMINE CONCENTRATIONS**

BO2 BR 17-00 BR 17-035735 NDN- 137-0272-3262-6

CARRUBA, M. O.; PICOTTI, G. B.; DA PRADA, M.

<b>ABBREVIATED VOL.</b>	<b>JOURNAL</b>	<b>TITLE- SUPPL</b>	<b>NEUROSCI</b>	<b>LETT</b>
<b>NO.</b>		1		
1978				
S276		page(s)		
<b>CODEN-</b>		NELED		
<b>LITERARY SUBFILE-</b>	<b>INDICATOR(S)-</b> BR		<b>ABSTRACT</b>	
		(Biological)	Abstracts)	

NO-ABSTRACT

**DESCRIPTOR(S)-** \*AMPHETAMINE; \*CHLORO; \*DEMETHYL; \*DEXTRO;  
 \*DOPAMINE; \*EPINEPHRINE; \*IMIPRAMINE; \*MAZINDOL; \*METABOLIC-  
 DRUG; \*METHAMPHETAMINE; \*NOREPINEPHRINE; \*P; \*PROTRYPTYLINE;  
 \*RAT

**BIOSIS Concept Code(s)-** 13012; 17020; 20504; 22024  
**BIOSYSTEMATIC CODES-** 86375

**Secondary Concept Code(s)-** 10060; 10064; 15002 .

---

**49. PURIFICATION OF A NEUROACTIVE PEPTIDE FROM MOLLUSCAN BRAIN BY AFFINITY CHROMATOGRAPHY ON NEUROPHYSIN SEPHAROSE**

BO2 BR 17-00 BR 17-035624 NDN- 137-0272-3151-8

HARMAR, A. J.; LEVITAN, I. B.

**ABBREVIATED JOURNAL TITLE- NEUROSCI LETT**

**VOL.** SUPPL  
**NO.** 1  
1978  
S219 page(s)  
**CODEN-** NELED  
**LITERARY** **INDICATOR(S)-** ABSTRACT  
**SUBFILE-** BR (Biological Abstracts)

NO-ABSTRACT

**DESCRIPTOR(S)-** \*FACTOR; \*HELIX; \*VASOPRESSIN-LIKE  
**BIOSIS** Concept **Code(s)-** 17002; 20504; 64026  
**BIOSYSTEMATIC** **CODES-** 61200  
Secondary Concept Code(s)- 10064; 10504; 10506; 12003; 12100; 20501 .

---

**50. LEVELS OF SOME NEUROACTIVE AMINO-ACIDS IN VARIOUS PARTS  
OF THE BRAIN IN EXPERIMENTAL HYPO PARATHYROIDISM**  
BO2 BA 68-00 BA 68-027886 NDN- 137-0263-7917-4

KHUDAVERDYAN, D. N.; TATEVOSYAN, A. T.

**ABBREVIATED** JOURNAL TITLE- ZH EKSP KLIN MED  
**VOL.** 18  
**NO.** 2  
1978

19-23 page(s)  
**CODEN-** ZKMAA

**AUTHOR AFFILIATION-** CENT. RES. LAB., YEREVAN MED. INST., YEREVAN,  
USSR.

**SUBFILE-** BA (Biological Abstracts)  
**LANGUAGE-** Russian

NO-ABSTRACT

**DESCRIPTOR(S)-** \*AMMINO; \*BUTYRIC-ACID; \*CORD; \*GAMMA;  
\*GLUTAMIC-ACID; \*HYPOTHALAMUS; \*RAT; \*SPINAL  
**BIOSIS** Concept **Code(s)-** 13012; 13020; 17010; 17020; 20504  
**BIOSYSTEMATIC** **CODES-** 86375  
Secondary Concept Code(s)- 10010; 10064; 10504; 10610 .

---

**51. EFFECT OF NEUROACTIVE AMINO-ACIDS ON ACTIVATION SYSTEMS  
OF THE SYMPATHETIC PREGANGLIONIC NEURONS**  
BO2 BA 68-00 BA 68-011206 NDN- 137-0262-1237-1

PETROV, V. I.

**ABBREVIATED JOURNAL TITLE- FIZIOL ZH SSSR IM I M SECHENOVA**

**VOL.** 64

**NO.** 5

1978

711-716 page(s)

**CODEN-** FZLZA

**AUTHOR AFFILIATION-** DIV. PHARMACOL., STATE MED. INST.,  
VOLGOGRAD, USSR.

**SUBFILE-** BA (Biological Abstracts)

**LANGUAGE-** Russian

NO-ABSTRACT

**DESCRIPTOR(S)-** \*CAT; \*GABA; \*GLUTAMIC-ACID; \*GLYCINE; \*PICRO;  
\*STRYCHNINE; \*TOXIN

**BIOSIS Concept Code(s)-** 10508; 20504; 22024

**BIOSYSTEMATIC CODES-** 26300; 26370; 85770

**Secondary Concept Code(s)-** 10010; 10060; 10064; 10504; 10610; 20501; 51522;  
54000 .

---

**52. EFFECT OF NEUROACTIVE AMINO-ACIDS ON THE CENTRAL  
CIRCULATORY REGULATION MECHANISMS**

BO2 BA 67-00 BA 67-043198 NDN- 137-0251-5733-9

KOVALEV, G. V.

**ABBREVIATED JOURNAL TITLE- FIZIOL ZH SSSR IM I M SECHENOVA**

**VOL.** 64

**NO.** 5

1978

702-710 page(s)

**CODEN-** FZLZA

**AUTHOR AFFILIATION-** DIV. PHARMACOL., STATE MED. INST.,  
VOLGOGRAD, USSR.

**SUBFILE-** BA (Biological Abstracts)

**LANGUAGE-** Russian

NO-ABSTRACT

**DESCRIPTOR(S)-** \*AMINO; \*BULBAR; \*BUTYRIC-ACID; \*CAT; \*CENTRAL;  
\*CHEMO; \*DEPRESSANT; \*FORMATION; \*GAMMA; \*GANGLION; \*GLYCINE;  
\*MECHANO; \*MOTOR; \*NERVE; \*RAT; \*RECEPTOR; \*RESPONSE;  
\*RETICULAR; \*SYMPATHETIC; \*VASO  
**BIOSIS Concept Code(s)-** 13012; 14504; 20504; 22010; 22024  
**BIOSYSTEMATIC CODES-** 85770; 86375  
**Secondary Concept Code(s)-** 10064; 10504; 10610; 14501; 17004; 17504; 20004;  
20501 .

---

**53. THE BIOCHEMISTRY OF BRAIN DEVELOPMENT AND MENTAL RETARDATION THE 11TH BLAKE MARSH LECTURE DELIVERED BEFORE THE ROYAL COLLEGE OF PSYCHIATRISTS 7 FEBRUARY 1977**

BO2 BR 15-00 BR 15-047071 NDN- 137-0246-3106-6

DAVISON, A. N.

ABBREVIATED VOL.	JOURNAL	TITLE-	BR	J	PSYCHIATRY
NO.		131			
1977;	(RECD	DEC			
565-574		page(s)	1978)		
<b>CODEN-</b>		BJPYA			
<b>SUBFILE-</b>	BR	(Biological		Abstracts)	

NO-ABSTRACT

**DESCRIPTOR(S)-** \*DRUG; \*EXPOSURE; \*HUMAN; \*LEAD; \* **NEUROACTIVE**;  
\*NUTRITION; \*RAT; \*UNDER  
**BIOSIS Concept Code(s)-** 13203; 20506; 21006; 22024; 22501; 22504; 25503  
**BIOSYSTEMATIC CODES-** 86215; 86375  
**Secondary Concept Code(s)-** 02506; 02508; 07003; 07004; 10069; 12003 .

---

**54. THE ENDORPHINS A NEW CLASS OF **NEUROACTIVE** AGENTS**

BO2 BR 15-00 BR 15-018259 NDN- 137-0243-4294-9

TERENIUS, L.

<b>ABBREVIATED</b>	<b>JOURNAL</b>	<b>TITLE-</b>	ACTA	PHARM	SUEC
<b>VOL.</b>		14			
<b>NO.</b>		SUPPL			
1977;	(RECD			1978)	
16		page(s)			
<b>CODEN-</b>		APSXA			
<b>LITERARY</b>		<b>INDICATOR(S)-</b>		ABSTRACT	
<b>SUBFILE-</b>	BR	(Biological		Abstracts)	

NO-ABSTRACT

**DESCRIPTOR(S)-** \*ADMINISTRATION; \*ANALGESICS; \*BRAIN; \*CENT-  
 DEPRESS-DRUGS; \*HUMAN; \*INTRA; \*MORPHINE; \*NALOXOANE; \*PAIN;  
 \*PITUITARY; \*VENOUS  
**BIOSIS Concept Code(s)-** 17014; 17020; 20504; 22016; 22024  
**BIOSYSTEMATIC CODES-** 26515; 86215  
**Secondary Concept Code(s)-** 10010; 10060; 10506; 14501; 22005; 22100; 51522;  
 54000 .

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**55. INTERACTION OF NEUROACTIVE AGENTS WITH PHOSPHO LIPID MONO LAYERS**

BO2	BR	13-00	BR	13-039052	NDN-	137-0214-4446-2
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COWDEN, M.	W.;	PETTI, C.	A.;	SCHWARTZ, S.	L.
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<b>ABBREVIATED</b>	<b>JOURNAL</b>	<b>TITLE-</b>	FED	PROC
<b>VOL.</b>		36		
<b>NO.</b>		3		
1977				
988		page(s)		
<b>CODEN-</b>		FEPRA		
<b>LITERARY</b>		<b>INDICATOR(S)-</b>		ABSTRACT
<b>SUBFILE-</b>	BR	(Biological		Abstracts)

NO-ABSTRACT

**DESCRIPTOR(S)-** \*ALTERATIONS; \*CHLORPROMAZINE; \*DOPAMINE;  
 \*MEMBRANE; \*NOREPINEPHRINE; \*PROPRANOLOL  
**BIOSIS Concept Code(s)-** 10508; 13002; 22003; 22024; 22504  
**BIOSYSTEMATIC CODES-** 00500  
**Secondary Concept Code(s)-** 10060; 10064; 10066; 13006; 13012; 17020; 22016 .

---

56. DISSOCIATION BETWEEN THE TONIC AND THE PHASIC EVENTS  
DURING RAPID EYE MOVEMENT SLEEP BY THE ADMINISTRATION OF  
SOME **NEUROACTIVE DRUGS** DISCUSSION 2

BO2 BR 12-00 BR 12-049190 NDN- 137-0190-9572-1

HATA, H.

ABBREVIATED JOURNAL TITLE- ELECTROENCEPHALOGRA CLIN  
NEUROPHYSIOL  
VOL. 39  
NO. 5  
1975  
543 page(s)  
CODEN- ECNEA  
LITERARY INDICATOR(S)- ABSTRACT  
SUBFILE- BR (Biological Abstracts)

NO-ABSTRACT

DESCRIPTOR(S)- \*AMO; \*BARBITAL; \*CHLORPROMAZINE; \*IMIPRAMINE;  
\*NITRAZEPAM

BIOSIS Concept Code(s)- 20004; 20504; 21003; 22024; 22026  
BIOSYSTEMATIC CODES- 86215

Secondary Concept Code(s)- 07004; 10060; 10062; 12100; 22005 .

---

57. INTERACTIONS BETWEEN OPIATES AND OTHER **NEUROACTIVE**  
SUBSTANCES PROSTAGLANDINS AND SEROTONIN

BO2 BR 11-00 BR 11-098283 NDN- 137-0171-8661-9

MUSACCHIO, J. M.

ABBREVIATED JOURNAL TITLE- NEUROSCI RES PROGRAM BULL  
VOL. 13  
NO. 1  
1975  
105-109 page(s)  
CODEN- NRPBA  
SUBFILE- BR (Biological Abstracts)

NO-ABSTRACT

DESCRIPTOR(S)- \*CENT-DEPRESS-DRUGS; \*GUINEA-PIG; \*HYDROXY;

\*INDOMETHACIN; \*PROSTAGLANDIN; \*SYNTHESIS; \*TRYPTAMINE; \*5  
**BIOSIS Concept Code(s)-** 20504; 22003; 22016; 22024  
**BIOSYSTEMATIC CODES-** 26515; 86300  
**Secondary Concept Code(s)-** 10060; 10064; 10066; 13006; 13012; 17002; 17020; 51522; 54000 .

---

**58. ISO AMYLAMINE AS THE POSSIBLE NEUROACTIVE METABOLITE OF L LEUCINE**

BO2 BA 60-00 BA 60-061417 NDN- 137-0161-1787-0

TASHIRO, S.; TANIGUCHI, E.; ETO, M.; MAEKAWA, K.

**ABBREVIATED JOURNAL TITLE-** AGRIC BIOL CHEM  
**VOL.** 39  
**NO.** 2  
1975  
569-570 page(s)  
**CODEN-** ABCHA  
**SUBFILE-** BA (Biological Abstracts)

NO-ABSTRACT

**DESCRIPTOR(S)-** \*DDT; \*DECARBOXYLASE; \*INSECTICIDE; \*LABEL;  
\*PERIPLANETA-AMERICANA; \*RADIO

**BIOSIS Concept Code(s)-** 10064; 10508; 13012; 20504; 20506; 22501; 64076; 64078

**BIOSYSTEMATIC CODES-** 75340

**Secondary Concept Code(s)-** 06504; 10060; 10506; 10610; 54600; 60016 .

---

**59. A HIGHLY ION SENSITIVE ATP PHOSPHORYLATION SYSTEM IN LOBSTER NERVE**

BO2 BR 10-00 BR 10-082372 NDN- 137-0146-2438-7

DOHERTY, J. D.; MATSUMURA, F.

**ABBREVIATED JOURNAL TITLE-** BIOCHEM BIOPHYS RES COMMUN  
**VOL.** 57  
**NO.** 4  
1974  
987-992 page(s)  
**CODEN-** BBRCA

SUBFILE-

BR

(Biological

Abstracts)

NO-ABSTRACT

DESCRIPTOR(S)- \*AGENTS; \*HOMARUS-AMERICANUS; \*MEMBRANE; \*  
NEUROACTIVE

BIOSIS Concept Code(s)- 10508; 10510; 13014; 20504; 22024; 64054  
BIOSYSTEMATIC CODES- 75112

Secondary Concept Code(s)- 06504; 07517; 10062; 10069

---

**60. ISOLATION OF A NEUROACTIVE SUBSTANCE L LEUCINE FROM THE  
BLOOD OF SILKWORM POISONED WITH DDT**

BO2 BA 56-00 BA 56-061244 NDN- 137-0113-1271-8

TASHIRO, S.; TANIGUCHI, E.; ETO, M.

ABBREVIATED JOURNAL TITLE- AGRIC BIOL CHEM  
VOL. 36

NO. (SUPPL 13)  
1972; (RECD 1973)

2465-2472 page(s)  
CODEN- ABCHA

SUBFILE- BA (Biological Abstracts)

NO-ABSTRACT

DESCRIPTOR(S)- \*AMERICAN; \*CHROMATOGRAPHY; \*COCKROACH; \*IR;  
\*PAPER; \*UV

BIOSIS Concept Code(s)- 06504; 10064; 10504; 15010; 20504; 22501; 60016; 64076;  
64078

BIOSYSTEMATIC CODES- 75330; 75340

Secondary Concept Code(s)- 10060; 12100; 54600; 64210

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Citations from Dissertation Abstracts: DIS

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**61. ELECTROPHYSIOLOGICAL PROPERTIES OF SPINAL DORSAL HORN  
NEURONS IN VITRO: CALCIUM-DEPENDENT ACTION POTENTIALS AND  
ACTIONS OF NEUROACTIVE PEPTIDES**

DIS OF NEUROACTIVE PEPTIDES 135-0083-4124-9

93-15-BK AAI8407109 NDN-

MURASE,

KAZUYUKI

**VOL.**

44-12B

1983

**PP.**

3673

183

page(s)

**CORPORATE  
INSTITUTION**

**AUTHOR-**

IOWA

STATE

UNIVERSITY

**CODE-**

0097

**Degree-**

PH.D.

**SUBFILE**

**CODE-**

DAI

**Document**

**Order**

**Number-**

AAI8407109

**Section-**

The

Sciences

and

Engineering

**LANGUAGE-**

English

(DEF)

The electrophysiological properties of the dorsal horn neurons in the superficial parts of the spinal dorsal horn, and actions of substance P, somatostatin and enkephalin on these cells have been investigated by intracellular recording in an immature rat spinal cord slice preparation. The ionic nature of the action potentials has been analyzed by modifying the ionic microenvironment, and by using ions or drugs known to block specific voltage-dependent conductances. We have shown that action potentials in immature rat dorsal horn neurons are generated by voltage-dependent conductance increases to sodium and calcium ions, and in particular that two distinct types of calcium spikes are probably present in these cells. Somatostatin and enkephalin hyperpolarized dorsal horn neurons and caused reduction or abolition of spontaneous firing. While the hyperpolarization produced by enkephalin was always associated with a fall in neuronal input resistance, in the case of somatostatin the similar effect was less consistently observed. These responses were brought about by both pre- and postsynaptic actions of the peptides. Bath application of substance P depolarized dorsal horn neurons and increased their excitability. The depolarization was most commonly associated with an increase in neuronal input resistance. SP-depolarization, in addition to a decrease in a voltage-dependent potassium conductance, may have been due to increases in sodium and calcium conductances. In about one-third of the cells, substance P induced a biphasic membrane response consisting of an initial hyperpolarization followed by a depolarization. The hyperpolarization was probably of presynaptic origin. Substance P modified the duration of the Ca-spike, the most consistent change being an initial decrease of the spike duration. Our data are consistent with a possibility that substance P shortens the duration of the Ca spike by decreasing a voltage sensitive inward Ca current and/or augmenting an outward potassium current.

**DESCRIPTOR(S)-**

BIOLOGY,

PHYSIOLOGY

**SECTIONAL CLASSIFICATION CODE- 0433 .**

62. THE DDT-SUSCEPTIBILITY OF THE AUSTRALIAN SHEEP BLOWFLY,  
LUCILIA CUPRINA, RELATED TO ITS PHYSIOLOGY  
DIS 93-14-BK AAI0551691 NDN- 135-0080-9289-4

BETTY, ROSEMARY CECILE

VOL. 44-02B

1982

PP. 428

CORPORATE AUTHOR- UNIVERSITY OF NEW SOUTH WALES (AUSTRALIA)

INSTITUTION		CODE-	0423
Degree-		PH.D.	
SUBFILE		CODE-	DAI
Document	Order	Number-	AAI0551691
Section-	The	Sciences	Engineering
LANGUAGE-		English	(DEF)

Object. To record several aspects of female Australian sheep blowfly's (Lucilia cuprina Wied.) behaviour and physiology that might influence responses to DDT and correlate with susceptibility (knockdown and kill). Studied. Feeding, grooming, locomotor activity, excitable state activity, oxygen consumption and sensory nerve firing rate. In each case fluctuations similar to a 24 hour cycle were found. Underlying the general respiratory pattern (similar to feeding and locomotor activity patterns) was a series of peaks and troughs present even during scotophase when flies were motionless, suggesting effects of locomotor and feeding activity superimposed on an underlying respiration pattern of the endogenous metabolic processes. There was a superficial correlation between peak times in blowfly labellar hair nervous activity and excitable state activity, suggesting that the well-defined complex cycle of nervous activity may be more widespread in blowfly nervous system. Although no significant changes occurred in kill effect of DDT over 24 hours, there appeared to be a connection between nervous activity and knockdown speed. Allowing for a 15 minute insecticide penetration time, blowflies dosed during a period of low labellar hair nervous activity were knocked down more slowly than those dosed 15 minutes before a peak in firing rate. In contrast to the former, the latter flies displayed a greatly increased initial rate of DDT-induced multiplicity. This suggested that sensory bombardment must reach a threshold level (rate of firing) before critical central changes leading to the release of ~~neuroactive~~ substance(s) were triggered (Brady, 1974). This level would be reached sooner in the 'fast' knockdown flies than in the others. When the temperature was dropped from 26 to 18(DEGREES)C, the peak in control firing disappeared and both groups displayed similar pre-treatment firing rates, DDT-induced multiplicity and KD(.50) times. Since firing rates recorded at knockdown (18(DEGREES)C) were lower than those recorded at knockdown for either group at 26 C, this suggested a lowering, with a drop in temperature, of the sensitivity threshold of the central synapses to abnormal incoming activity from the sensory nerves, thus contributing to the negative temperature coefficient characteristic of DDT.

DESCRIPTOR(S)- BIOLOGY, ZOOLOGY  
SECTIONAL CLASSIFICATION CODE- 0472

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63. PURIFICATION AND CHARACTERIZATION OF LPT-H, A PROTEIN  
THAT OPENS PRESYNAPTIC CALCIUM CHANNELS

DIS 93-13-BK AAI0537596 NDN- 135-0077-6127-9

CROSLAND, RICHARD DAVIS

VOL. 43-01B  
1982

PP. 20

CORPORATE AUTHOR- UNIVERSITY OF SOUTHERN CALIFORNIA  
INSTITUTION CODE- 0208

Degree- PH.D.

SUBFILE CODE- DAI

Document Order Number- AAI0537596

Section- The Sciences and Engineering

LANGUAGE- English (DEF)

LPT-h, a protein from the hemolymph of the beetle Leptinotarsa haldemani has been purified and has been found to increase the permeability of synaptosomes to Ca('2+). In 1969 Hsiao and Fraenkel reported that the hemolymph of L. haldemani was lethal to flies and mice. Subsequent studies by McClure et al. (1980) showed that leptinotarsin-h, a partially purified protein from the hemolymph of L. haldemani, caused a massive, biphasic increase in the frequency of miniature endplate potentials at the neuromuscular junction of the rat. Yoshino et al (1980) demonstrated that leptinotarsin-h also promoted the release of {('3)H}acetylcholine from synaptosomes prepared from rat brain. Further purification and characterization of the neuroactive component(s) from the hemolymph of L. haldemani could provide a useful probe with which to dissect the mechanism of release of neurotransmitters. Neuroactivity was measured as the release of {('3)H}acetylcholine and {('3)H}choline from synaptosomes which had been previously loaded with {('3)H}choline. LPT-h was purified over 1000 fold by column chromatography, but was not homogeneous as judged by sodium dodecylsulfate polyacrylamide gel electrophoresis. LPT-h has a molecular weight of 57,000 as determined by molecular sieve chromatography and gel electrophoresis. LPT-h meets all of the criteria of a substance that opens CA('2+) channels (Hagiwara and Byerly, 1981). Release stimulated by LPT-h is dependent on extracellular Ca('2+), not affected when extracellular Na('+) is replaced by a large monovalent cation, not affected by tetrodotoxin, blocked by Cd('2+) and Co('2+) in the presence of Ca('2+) and supported by Ba('2+) and Sr('2+). Finally, LPT-h promotes the uptake of Ca('2+) into synaptosomes. LPT-h also stimulates the release of {('3)H}gamma-aminobutyric acid and

{(3)H}norepinephrine from synaptosomes. LPT-h may prove to be a useful tool with which to localize and purify presynaptic Ca(2+) channels.

**DESCRIPTOR(S)-** BIOLOGY, **GENERAL**  
**SECTIONAL CLASSIFICATION CODE- 0306**

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**64. PURIFICATION AND CHARACTERIZATION OF CHOLINE ACETYLTRANSFERASE FROM DROSOPHILA MELANOGASTER**  
DIS 93-13-BK AAI0537140 NDN- 135-0076-9035-2

SLEMMON, JOHN RANDALL

**VOL.** 42-10B

1981

**PP.** 4051

**CORPORATE AUTHOR- UNIVERSITY OF SOUTHERN CALIFORNIA**  
**INSTITUTION** **CODE-** 0208

**Degree-** PH.D.

**SUBFILE** **CODE-** DAI

**Document** **Order** **Number-** AAI0537140

**Section-** The **Sciences** and **Engineering**

**LANGUAGE-** English **(DEF)**

Choline acetyltransferase (ChAT, EC 2.3.1.6) catalyzes the formation of the **neuroactive** quaternary amine, acetylcholine. Although this enzyme activity has long been a marker for acetylcholine-using neural systems, little is known about its molecular nature. The study presented describes the purification and characterization of ChAT from *Drosophila melanogaster*. Analysis of the purified protein on polyacrylamide gel electrophoresis in SDS (PAGE-SDS, 10% acrylamide) showed two major polypeptides of 68 K and 54 K daltons. There were also small amounts of material with a lower molecular weight (< 44 K daltons). These polypeptides were shown to be related to the enzyme activity in the following fashion. The purified enzyme exhibited specific enzyme activity in the range of the theoretically expected value; the polypeptides were shown to be structurally related; and two different lines of monoclonal antibodies against *Drosophila* ChAT activity specifically precipitated all of the polypeptides. The several polypeptides visualized after PAGE-SDS were derived from the single enzyme peak of 68 K daltons found on molecular exclusion chromatography of the native enzyme. Analysis of the 68 K dalton enzyme purified by molecular exclusion chromatography on gels containing 15% acrylamide revealed the presence of an additional major polypeptide with a molecular weight of 13 K daltons. Structural analysis of this smaller polypeptide suggested that it originated from a unique region of the 68 K dalton polypeptide distinct from the 54 K dalton polypeptide. It appears that, in the native state, the 13 K and 54 K dalton polypeptides exist as a 68 K dalton complex. Peptide maps, amino acid analyses, and

immunological characterization indicated the close relationship of the minor enzyme polypeptides to the major ones. The data showed that *Drosophila* ChAT probably contains regions of repeating primary structure. This suggests that the enzyme may have evolved by gene duplication(s) and that subsequently there has been little alteration of its primary structure.

**DESCRIPTOR(S)-** CHEMISTRY, BIOCHEMISTRY  
**SECTIONAL CLASSIFICATION CODE-** 0487

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**65. A UNIQUE ROLE FOR THE SODIUM ION, POTASSIUM ION - ATPASE IN  
THE DETERMINATION OF NEUROTRANSMITTER  
COMPARTMENTATION**

DIS 93-13-BK AAI8129983 NDN- 135-0076-1807-0

O'FALLON, JAMES VERNON

VOL. 42-07B

1981

PP. 2814

68 page(s)

**CORPORATE INSTITUTION** AUTHOR- WASHINGTON STATE UNIVERSITY  
CODE- 0251

Degree- PH.D.

**SUBFILE**

CODE-

DAI

**Document** Order Number- AAI8129983

Section- The Sciences and Engineering  
LANGUAGE- English (DEF)

The Na<sup>(+)</sup>, K<sup>(+)</sup>-ATPase is an integral membrane protein that generates and maintains the membrane potential in nervous tissue. The Na<sup>(+)</sup> gradient that is established by this enzyme has been linked to the transport of compounds, including neurotransmitters and amino acids, across synaptic membranes. It has been further suggested that the Na<sup>(+)</sup>, K<sup>(+)</sup>-ATPase may be a trigger in neurotransmitter release; inhibition of the Na<sup>(+)</sup>, K<sup>(+)</sup>-ATPase can induce neurotransmitter release while activation inhibits release. In order to elucidate further the role of the Na<sup>(+)</sup>, K<sup>(+)</sup>-ATPase as a possible trigger, a comparison was made between the releasability of eight neurotransmitters from eight regions of mouse brain in response to either 60 mM K<sup>(+)</sup> or 20 (μM) ouabain, a specific inhibitor of the Na<sup>(+)</sup>, K<sup>(+)</sup>-ATPase. With few exceptions, all transmitters were released by either or both agents from each brain region examined. Potassium was superior in releasing the biogenic amines and acetylcholine, while the putative amino acid transmitters were generally releasable by both agents. Measurements of tissue depolarization, using {(3)H}tetraphenylphosphonium uptake indicated that 60 mM K<sup>(+)</sup> was capable of depolarizing brain tissue above the threshold necessary for initiating an

action potential, but 20 (mu)M ouabain was not. The pattern of release by ouabain coupled with its failure to depolarize brain tissue at 20 (mu)M suggested that inhibition of the Na(+)<sub>+</sub>, K(+)<sub>+</sub>-ATPase was capable of releasing cytoplasmic neurotransmitters in a voltage-independent manner. Advantage was taken of the observation that 20 (mu)M ouabain induced the release of cytoplasmic transmitters to develop a method for quantifying the release of transmitters from neuronal-vesicular, neuronal-cytoplasmic, and glial compartments. In this method, 20 (mu)M ouabain was used in parallel with two other **neuroactive** agents, 60 mM K(+) and 20 (mu)M veratridine. The effects of these three agents on neurotransmitter release can be summarized by three simultaneous equations which contain the three transmitter compartments as variables. Coefficients for the fractional amount of transmitter released from each compartment by each agent were obtained from model transmitter-region combinations. After the coefficients had been empirically established, the equations were applied to the data obtained on the release of eight transmitters from eight mouse brain regions. The results provided a quantitative evaluation of compartmentation for each transmitter in each brain region examined. The methodology that was developed in this work should be generally applicable to studies involving both compartmentation and transport of neurotransmitters.

**DESCRIPTOR(S)-** CHEMISTRY, BIOCHEMISTRY  
**SECTIONAL CLASSIFICATION CODE-** 0487 .

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**66. NEUROPEPTIDES AND EXCITABILITY OF MAMMALIAN SPINAL NEURONS**

DIS 93-13-BK AAI8122542 NDN- 135-0075-3503-6

MILETIC, VJEKOSLAV

**VOL.** 42-04B

1981

**PP.** 1337  
122 page(s)

**CORPORATE INSTITUTION** AUTHOR- IOWA STATE UNIVERSITY  
CODE- 0097

Degree- PH.D.

**SUBFILE** CODE- DAI  
**Document** Order Number- AAI8122542

Section- The Sciences and Engineering  
**LANGUAGE-** English (DEF)

The **neuroactive** peptides, substance P (SP), methionine-enkephalin (ME), somatostatin (SS) and neuropeptides, have been implicated recently in synaptic transmission processes at the level of spinal cord areas intimately involved in sensory integration. The purpose of this project was to examine the possible actions of four of these peptides on

the excitability of functionally identified dorsal horn and dorsal spinocerebellar tract (DSCT) neurons in the cat spinal cord *in vivo*, and dorsal horn neurons in rat spinal cord slices *in vitro*. Neuronal activity was monitored extracellularly, while the neuropeptides were applied by iontophoresis. SP caused a strong excitation of all tested neurons selectively activated by noxious stimuli, or receiving an input in A(delta) and C primary afferents (PAs), and located in laminae I-III of the cat spinal cord. The majority of units adequately activated by innocuous skin stimuli, however, were not affected by SP. SP also excited a third of the DSCT neurons tested in the intact cat spinal cord, although in most of these units, the excitation was slight when compared to the SP-produced excitation in laminae I-III. ME and SS had selective depressant actions on the excitability of nociceptive cat spinal neurons located in laminae I, II and V. In contrast, the majority of units activated by innocuous skin stimuli were either not affected or weakly excited by ME and SS. Naloxone antagonized the ME depression in all nociceptive neurons, while not affecting responses of units activated by innocuous stimuli, indicating that ME was probably acting upon opiate receptors. SS actions were not modified by naloxone. NT caused a slight to moderate excitation of about 2/3 of all tested cat spinal neurons in laminae I-III. This excitation was not limited to a single population of neurons, however, but was observed in all categories of units recognized in this area on the basis of their excitability by different kinds of cutaneous input. These results *in vivo* suggested that all four neuropeptides, SP, ME, SS and NT, may play a role in synaptic transmission processes at synapses between PA fibers and dorsal horn neurons in the cat spinal cord. Moreover, it appeared that SP, ME and SS act principally at synapses of spinal nociceptive pathways, while NT did not show such selectivity. In order to determine a more precise site of neuropeptide action, the rat spinal cord slice preparation *in vitro* was developed. Responses of the dorsal horn neurons *in vitro* to iontophoretic application of SP, ME and SS were qualitatively similar to those obtained in the intact cat spinal cord. Since SP, ME and SS actions persisted during synaptic transmission blockade with Ca('++)-free, Mg('++)-high bathing media, it appeared that these ~~neuroactive~~ peptides were acting mostly on postsynaptic sites of the dorsal horn neurons tested.

**DESCRIPTOR(S)-**                    **BIOLOGY,**                    **PHYSIOLOGY**  
**SECTIONAL CLASSIFICATION CODE- 0433 .**

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**67. INTERACTION OF AGENTS WITH DOPAMINE AND SEROTONIN  
NEUROTRANSMITTER SYSTEMS**

**DIS**                    **93-13-BK**                    **AAI8117702 NDN-**                    **135-0074-9952-4**

**ROSENFELD,**                    **MYRNA**                    **RACHEL**

**VOL.**                    **42-03B**

**1981**

**PP.**

**193**

**984**

**page(s)**

<b>CORPORATE INSTITUTION</b>	<b>AUTHOR- CODE-</b>	<b>YESHIVA</b>	<b>UNIVERSITY</b>
<b>Degree-</b>		<b>PH.D.</b>	<b>0266</b>
<b>SUBFILE</b>	<b>CODE-</b>		<b>DAI</b>
<b>Document</b>	<b>Order</b>	<b>Number-</b>	<b>AAI8117702</b>
<b>Section-</b>	The	Sciences	Engineering
<b>LANGUAGE-</b>		and English	(DEF)

The interaction of several **neuroactive** agents with the dopaminergic and serotonergic neurotransmitter systems in mammalian brain was studied. Two approaches were taken: (1)the effect of the agents on dopamine and serotonin stimulated adenylate cyclase and (2)the ability of the compounds to bind directly to dopamine or serotonin receptor sites. The compounds of particular interest were the ergot derivatives lisuride and pergolide and the neuroleptic agent, molindone. All of these compounds have been used clinically for the treatment of disorders such as migraine, Parkinson's disease and psychotic illness. Studies were carried out using rabbit or rat brain. Adenylate cyclase activity was studied in crude homogenates. Cyclic AMP levels were determined with a protein binding assay. Direct receptor binding studies were performed on washed tissue homogenates. Adenylate cyclase activity was studied in three brain regions, frontal cortex, anterior limbic cortex and caudate nucleus of the rabbit and in the striatum of rat. Serotonin-sensitive adenylate cyclase was found in both cortical regions but not in caudate. Dopamine-sensitive adenylate cyclase was found in all regions. The cortical dopamine-sensitive adenylate cyclase was distinguished from the activity in caudate by its greater sensitivity to the dopamine analog, ADTN. Lisuride was found to be an extraordinarily potent stimulator of serotonin-stimulated adenylate cyclase. Lisuride produced significant stimulations at concentrations as low as  $10^{-9}$  M. Pergolide stimulated dopamine-sensitive adenylate cyclase in rat striatum. Lisuride, lergotriptane and bromocriptine were inactive in stimulating the dopamine-sensitive adenylate cyclase. Molindone was shown to be a rather selective antagonist of serotonin-stimulated adenylate cyclase and was used as a tool to study the interaction of lisuride and the other ergots with adenylate cyclase. In addition, the effect of 1 ( $\mu$ M) GTP on the ability of the ergots to interact with dopamine-sensitive adenylate cyclase in rat striatum was investigated. This concentration of GTP enhanced the stimulation produced by pergolide while having no effect on lisuride, lergotriptane or bromocriptine. The ability of lisuride and molindone to interact with dopamine and serotonin receptor sites in rabbit frontal cortex and caudate nucleus and rat striatum was studied. Ligands used to study serotonin receptors in cortex were  $\{^3\text{H}\}$ serotonin,  $\{^3\text{H}\}$ spiroperidol and  $\{^3\text{H}\}$ LSD. Serotonergic sites in caudate were studied with  $\{^3\text{H}\}$ serotonin and dopaminergic sites with  $\{^3\text{H}\}$ ADTN.  $\{^3\text{H}\}$ LSD binding in caudate was shown to be to both dopamine and serotonin receptor sites. Lisuride could bind to serotonergic sites in cortex and both dopaminergic and serotonergic sites in caudate nucleus with IC<sub>50</sub>'s in the nM range. Furthermore, the interaction of lisuride at serotonergic sites in frontal cortex was determined to be that of an agonist by the sensitivity of this interaction to the guanine nucleotide analog Gpp(NH)p. In contrast, molindone interacted weakly with all receptor binding sites studied. Both lisuride and molindone interacted non-selectively with the serotonin and dopamine subcomponents of  $\{^3\text{H}\}$ LSD binding in rabbit caudate nucleus. Lisuride and

molindone were shown to interact with both guanine nucleotide sensitive and insensitive  $\{\text{'3}\text{H}\}$ ADTN and  $\{\text{'3}\text{H}\}$ serotonin binding sites. Lisuride showed a slight preference for the nucleotide sensitive sites of both of these ligands. Molindone interacts preferentially with the nucleotide sensitive component of  $\{\text{'3}\text{H}\}$ serotonin binding. The effect of ions and different tissue preparations of receptor binding was also investigated. Lisuride is shown to interact with both serotonin receptors coupled to adenylyl cyclase and with serotonin receptors not coupled to adenylyl cyclase. While lisuride does not stimulate dopamine-sensitive adenylyl cyclase it can interact with dopamine receptor sites. Molindone is demonstrated to be a selective antagonist of serotonin-stimulated adenylyl cyclase. In contrast to other neuroleptic agents, molindone is not selective for dopamine-coupled adenylyl cyclase receptors but rather has weak interactions with both adenylyl cyclase coupled and non-coupled dopamine receptors.

**DESCRIPTOR(S)-** HEALTH SCIENCES, PHARMACOLOGY  
**SECTIONAL CLASSIFICATION CODE-** 0419

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**68. INTERACTION OF ENDOGENOUS OPIOID AND OTHER NEUROACTIVE PEPTIDES IN FELINE HYPOTHALAMUS: AN IMMUNOFLUORESCENCE STUDY**

DIS 93-12-BK AAI8102126 NDN- 135-0073-1319-2

MICEVYCH, PAUL E.

**VOL.** 41-07B

1980

**PP.** 2436

230 page(s)

**CORPORATE INSTITUTION** AUTHOR- UNIVERSITY OF MINNESOTA  
CODE- 0130

Degree- PH.D.

**SUBFILE** CODE- DAI

**Document** Order Number- AAI8102126

Section- The Sciences and Engineering

**LANGUAGE-** English (DEF)

NO-ABSTRACT

**DESCRIPTOR(S)-** BIOLOGY, ANATOMY  
**SECTIONAL CLASSIFICATION CODE-** 0287

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**69. THEORETICAL ASSAY CONSIDERATIONS OF NEUROACTIVE  
SUBSTANCES AND MEASUREMENT OF LITHIUM IN INTACT TISSUE BY  
RADIOGRAPHIC DIELECTRIC TRACK REGISTRATION TECHNIQUES.**

DIS 93-10-BK AAI0511141 NDN- 135-0062-7346-0

NELSON, SHERWIN CLIVE

**VOL.** 38-04B

1975

**PP.** 1525  
**CORPORATE INSTITUTION** AUTHOR- STANFORD UNIVERSITY  
**Degree-** CODE- 0212  
**SUBFILE Document** CODE- DAI  
**Section-** Order Number- AAI0511141  
**LANGUAGE-** The Sciences and Engineering  
English (DEF)

NO-ABSTRACT

**DESCRIPTOR(S)-** BIOPHYSICS, MEDICAL  
**SECTIONAL CLASSIFICATION CODE-** 0760

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**70. CHEMICAL PROPERTIES AND PHYSIOLOGICAL ACTIVITY OF A  
NEUROACTIVE COMPONENT FROM THE VENOM OF CONUS  
CALIFORNICUS.**

DIS 93-09-BK AAI7524772 NDN- 135-0056-7056-8

ELLIOTT, ELLEN JEANNE

**VOL.** 36-05B

1975

**PP.** 2087  
179 page(s)  
**CORPORATE INSTITUTION** AUTHOR- CALIFORNIA INSTITUTE OF TECHNOLOGY  
**Degree-** CODE- 0037  
**SUBFILE Document** CODE- DAI  
**Section-** Order Number- AAI7524772  
**LANGUAGE-** The Sciences and Engineering  
English (DEF)

NO-ABSTRACT

**DESCRIPTOR(S)-** BIOLOGY, **PHYSIOLOGY**  
**SECTIONAL CLASSIFICATION CODE- 0433**

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**71. SOME CHEMICAL CHARACTERISTICS OF NEUROACTIVE AGENTS IN  
THE BLOOD OF DDT-POISONED COCKROACHES, CRAYFISH AND  
CRABS.**

DIS 93-05-BK AAI6100141 NDN- 135-0025-7151-8

HAWKINS, WILLIAM BROWN

VOL. 21-10

1960

PP. 3140  
34 page(s)

**CORPORATE** AUTHOR- UNIVERSITY OF ILLINOIS AT URBANA-  
CHAMPAIGN

**INSTITUTION** CODE- 0090

Degree- PH.D.

**SUBFILE** CODE- DAI

**Document** Order Number- AAI6100141

**LANGUAGE-** English (DEF)

NO-ABSTRACT

**DESCRIPTOR(S)-** BIOLOGY, **PHYSIOLOGY**  
**SECTIONAL CLASSIFICATION CODE- 0433**

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**72. IMMUNOHISTOCHEMICAL AND IN SITU HYBRIDIZATION STUDIES  
ON PEPTIDES IN THE HYPOTHALAMO-PITUITARY SYSTEM  
(IMMUNOHISTOCHEMISTRY)**

DIS 93-04-BK AAIC237394 NDN- 135-0020-7850-4

CECCATELLI, SANDRA

VOL. 53-03C

1991

PP. 451  
260 page(s)

ISBN-	91-628-0467-7		
CORPORATE INSTITUTION	AUTHOR-	KAROLINSKA INSTITUTET	(SWEDEN)
Degree-	CODE-	0658	
		MED.DR	
SUBFILE	CODE-	DAI	
PUBLISHER-	KAROLINSKA INSTITUTE, BOX 60400, S-104 01 STOCKHOLM, SWEDEN		
Document	Order	Number-	AAIC237394
Section-	European	Abstracts	
LANGUAGE-	English	(DEF)	

Peptidergic hypothalamic neurons involved in control of anterior pituitary hormone secretion were studied with immunohistochemical and *in situ* hybridization techniques in rats. The distribution of corticotropin-releasing factor/hormone (CRF/CRH), neuropeptides (NT), enkephalin (ENK), vasoactive intestinal polypeptide (VIP), peptide histidine isoleucine (PHI), cholecystokinin (CCK), galanin (GAL) and thyrotropin-releasing hormone (TRH) was analyzed in detail with immunohistochemistry in the various subdivisions of the parvocellular part of the hypothalamic paraventricular nucleus (PVN) of colchicine treated rats. The coexistence of CRF- and NT-like immunoreactivities (LI) with other neuropeptides was studied. The results indicated that coexistence of two or more peptides in the PVN is common, and revealed that about 30% of the CRF neurons contain NT-LI and about 20% ENK-LI, whereas other peptides, including VIP/PHI only occur in small fractions of the CRF cells. TRH neurons represented a neuron population completely distinct from the CRF neurons. Glucocorticoid receptor (GR)-LI is present in the parvocellular part of the PVN, and virtually every parvocellular neuron in the PVN containing one of the above mentioned peptides is also positive for GR. The distribution of VIP/PHI in the hypothalamus was analyzed using immunohistochemistry and *in situ* hybridization. The c-fos immunohistochemistry was used to identify neuronal circuitries activated after different types of stressors including intracerebroventricular injection of colchicine. All the procedures induced c-Fos-LI in stress response-related areas such as the PVN, where many of the activated neurons showed CRF-LI. c-Fos-LI was observed in subpopulations of neurons in the locus coeruleus, the ventrolateral medulla oblongata and the nucleus tractus solitarius, and many of these cells express in addition catecholamine synthesizing enzymes. Further studies were performed to investigate the effects of colchicine. In order to assess whether or not colchicine might influence the synthesis of neuroactive compounds, *in situ* hybridization was used to examine the levels of mRNAs encoding for several neuropeptides in the hypothalamus and other brain areas. To study effects of catecholamines on mRNA and peptide levels in the PVN, the monoamine depleting drug reserpine was used. A marked increase in the mRNA encoding for CRH, NT and ENK was observed in the PVN. The mRNA of PVN peptides which seem to play a key role in ACTH secretion was analyzed after exposure to a variety of physical and psychological stressors. The results showed a differential increase in mRNA levels for various peptides, suggesting that such messenger molecules may be involved in mediating the hypothalamic response to different types of stressors. A marked upregulation of TRH and VIP mRNA and downregulation of CRH and GAL mRNA were seen in the PVN after thyroidectomy. (Abstract shortened by UMI.)

**DESCRIPTOR(S)-** BIOLOGY, NEUROSCIENCE  
**SECTIONAL CLASSIFICATION CODE-** 0317

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**73. DIFFERENTIATION IN FREE-LIVING FLATWORMS:  
ULTRASTRUCTURAL, IMMUNOCYTOCHEMICAL AND  
AUTORADIOGRAPHIC STUDIES OF ASEXUALLY REPRODUCING AND  
REGENERATING MICROSTOMUM LINEARE (MACROSTOMIDA)  
(IMMUNOCYTOCHEMISTRY)**

DIS 93-04-BK AAIC201407 NDN- 135-0020-6133-4

PALMBERG, IRMELI ELISABETH

**VOL.** 53-01C

1990

**PP.** 39

145 page(s)

**ISBN-** 951-649-800-0

**CORPORATE AUTHOR-** ABO AKADEMI (FINLAND)

**INSTITUTION CODE-** 0523

**Degree-** FD

**SUBFILE CODE-** DAI

**PUBLISHER-** DEPARTMENT OF BIOLOGY, ABO AKADEMI UNIVERSITY, SF-  
20500 ABO, FINLAND

**Document Order Number-** AAIC201407

**Section-** European Abstracts

**LANGUAGE-** English (DEF)

The aim of this research was to study differentiation on the cellular and tissular level and the importance of the nervous system during asexual reproduction and regeneration in free-living flatworms with special reference to the microturbellarian *Microstomum lineare* (Macrostomida). Proliferation, migration and differentiation of the stem cells (neoblasts) were followed by serial sections of light and electron microscopic autoradiography with tritiated thymidine ( $\text{\textsuperscript{3}H}$  T), and in combination with recent immunocytochemical methods. Differentiation of the nervous system was also investigated by immunocytochemical methods on whole-mount preparations. In addition, immunocytochemical methods, the Falck-Hallarp histofluorescence method for bioamines, and selective neurosecretory staining methods were used to complete ultrastructural studies, performed mainly by conventional electron microscopical methods as the basis for differentiation and regulation studies. Asexual reproduction in *M. lineare* occurs by paratomy, i.e. fission after completed differentiation of the new organs. Regeneration, on the other hand, involves a combination of morphallactic and epimorphic processes without the formation of a regeneration blastema. The nervous system and its

**neuroactive** substances played a regulatory role in both processes. Initiation of the development of a new zooid was characterized by immunoreactivity to 5-HT in the postpharyngeal commissure and in a cell group at its branching point with the parental lateral nerve cords, while initiation of regeneration was characterized by strongly increased immunoreactivity to FMRF/RF-amide in the amputated nerve ends. The only cells incorporating (<sup>3</sup>H) T, i.e. proliferative cells, were the mesenchymal and gastrodermal neoblasts, which are distributed without any growth zones and which proliferate continuously, thus replenishing the population of stem cells available for growth, asexual reproduction and regeneration. These proliferative cells occurred in two ultrastructurally different forms, differing from each other by the presence or absence of ciliar basal bodies in the cytoplasm, probably corresponding to the rapidly and slowly cycling cells, respectively. They were also supposed to give rise to different cell types due to the presence of ciliary structures in mature cells. Many labelled cells were, however, still undifferentiated or just in the beginning of the differentiation process at the time of the completed regeneration or fission (i.e. 20-45 hours after the treatment with (<sup>3</sup>H) T). It can therefore be concluded that neoblasts function both as stem cells for all differentiated cell types and as reserve cells with a determined lifetime.

**DESCRIPTOR(S)-** BIOLOGY, CELL  
**SECTIONAL CLASSIFICATION CODE-** 0379 .

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**74. HYPOTHALAMIC NEUROSECRETORY NEURONS: HISTOCHEMICAL AND EXPERIMENTAL STUDIES ON DISTRIBUTION AND REGULATION WITH SPECIAL REFERENCE TO MULTIPLE MESSENGER SYSTEMS**

DIS 93-04-BK AAIC124930 NDN- 135-0020-1754-0

MEISTER, BJORN

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Section- European Abstracts

LANGUAGE- English (DEF)

The distribution and regulation of hypothalamic neurosecretory neurons was studied with immunohistochemical and in situ hybridization techniques. Special interest was focussed on neurons containing more than one messenger molecule. In the ventrolateral part of the arcuate nucleus, coexistence of tyrosine hydroxylase (TH)- (the catecholamine-synthesizing enzyme), glutamic acid decarboxylase (GAD)- (a marker for GABA neurons), choline acetyltransferase (ChAT)- (a marker for acetylcholine neurons), growth hormone-releasing factor (GRF)-, galanin (GAL)- and neurotensin (NT)-like immunoreactivity (LI) was found in high numbers of neurons, whereas small numbers of TH-immunoreactive (IR) neurons also contained dynorphin (DYN)-, leu-enkephalin (ENK)- or met-ENK-8-LI. In the dorsomedial part of the arcuate nucleus, coexistence of TH-, GAD- and NT-LI was observed in many neurons, and a few of the TH-IR neurons in this part also contained GAL-, DYN- and Leu-ENK-LI. In the ventromedial part of the arcuate nucleus, neuropeptide Y (NPY)- and somatostatin (SOM)-IR neurons constituted separate cell populations, and no evidence for coexistence with any other **neuroactive** substance was observed. In the median eminence, coexistence of GAD-LI with TH-, NT-, GAL- and GRF-LI was shown within single nerve fiber varicosities, indicating a corelease of these messenger molecules at this site. TH-IR neurons in the arcuate nucleus constitute two different cell populations. The TH-IR neurons in the dorsomedial aspect of the nucleus showed strong TH-LI and they contained aromatic L-aminoacid decarboxylase (AADC)-, the enzyme converting L-DOPA into dopamine (DA), DA-LI and formaldehyde-induced fluorescence, whereas the TH-IR neurons in the ventrolateral aspect showed weak TH-LI but they lacked AADC-, DA-LI and formaldehyde-induced fluorescence. Neonatal administration of monosodium L-glutamate (MSG) induced lesions in the ventrolateral and ventromedial parts of the arcuate nucleus, but only to a lesser extent in the dorsomedial part of the nucleus. A complete loss of cell bodies containing GRF-, GAL-, DYN-, ENK-, NPY-, neuropeptide K (NPK) and proopiomelanocortin (POMC) was observed. The remaining dislocated dorsomedial part of the arcuate nucleus contained TH-, GAD-, NT- and SOM-IR neurons and NT-binding sites. (Abstract shortened by UMI.)

**DESCRIPTOR(S)-** BIOLOGY, NEUROSCIENCE  
**SECTIONAL CLASSIFICATION CODE- 0317**

75. ADENOSINE AS A RETINAL REGULATOR (RECEPTORS)  
DIS 93-04-BK AAIC107137 NDN- 135-0020-0727-3  
  
PEREZ, MARIA THEREZA RODRIGUEZ  
  
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<b>CORPORATE INSTITUTION</b>	<b>AUTHOR-</b>	<b>LUNDS</b>	<b>UNIVERSITET</b>	<b>(SWEDEN)</b>
<b>Degree-</b>	<b>CODE-</b>		<b>0899</b>	
<b>SUBFILE</b>	<b>CODE-</b>	<b>MED.DR</b>		
<b>PUBLISHER-</b>	<b>MARIA THEREZA R. PEREZ,</b>	<b>DEPARTMENT OF OPHTHALMOLOGY - UNIVERSITY HOSPITAL OF LUND, S-221 85 LUND, SWEDEN</b>		
<b>Document</b>	<b>Order</b>	<b>Number-</b>	<b>AAIC107137</b>	
<b>Section-</b>	European		<b>Abstracts</b>	
<b>LANGUAGE-</b>	English		<b>(DEF)</b>	

In spite of a well established role for adenosine as a neuromodulator in both central and peripheral nervous systems, little is known about its function in the vertebrate retina. The aim of the present work was to investigate some aspects of the mechanisms of action of adenosine in the retina, focusing on studies on its release, uptake and metabolism in retinal tissue, as well as on its interaction with other established retinal neurotransmitters. Adenosine and its metabolites were seen to be continuously released by retinal cells. The rate of release was increased in response to depolarizing agents (potassium, light), as well as to the selective activation of various neurotransmitter receptors. The evoked release was, in most cases, at least partly calcium-dependent, and the effect of neurotransmitter agonists was reduced or could be completely blocked by receptor antagonists. These results indicate that there is a functional release of adenosine by retinal cells and that an adenosinergic tonus may be maintained in the retina. Exogenous adenosine and related compounds were found by autoradiography to be selectively taken up and stored by subpopulations of cells in the inner nuclear layer and in the ganglion cell layer in the retina of various species. Exogenous adenosine was mainly incorporated into adenine nucleotides, with ATP being the most abundant purine compound found in the retinal tissue. It thus appears that retinal cells also possess mechanisms for the inactivation of released adenosine both by uptake and by metabolism. The application of adenosine receptor agonists decreased the potassium-evoked release of acetylcholine from the retina, and this effect was abolished by adding an adenosine receptor antagonist. This indicates the presence of adenosine receptors in retinal cells also capable of mediating a modulation of neurotransmitter release. An indication that adenosine may be interacting with the GABA system in the retina was obtained in double-labeling studies which showed that certain cells in the inner nuclear and in the ganglion cell layers in the rabbit and chicken retinas have the ability to accumulate exogenous adenosine and to label for endogenous GABA. This type of colocalization may suggest that adenosine and GABA are coreleased from these cells, and could represent one of the possible sources of adenosine which in turn can modulate the effects induced by GABA. Hence, adenosine appears to play an important modulatory role in the regulation of signal transmission in the retina partly by interacting with other neuroactive compounds.

**DESCRIPTOR(S)-**                    **BIOLOGY,**                    **NEUROSCIENCE**  
**SECTIONAL CLASSIFICATION CODE-** 0317 .

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76. **NEUROACTIVE SUBSTANCES IN THE SUPERIOR CERVICAL GANGLION OF THE RAT: AN IMMUNOHISTOCHEMICAL STUDY (SYMPATHETIC, MODULATOR)**

DIS 93-04-BK AAIC069507 NDN- 135-0019-8574-3

HAPPOLA, OLLI PEKKA

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**ISBN-** 951-99960-9-5

**CORPORATE INSTITUTION** **AUTHOR-** HELSINGIN YLIOPISTO (FINLAND)

**CODE-** 0592

**Degree-** M.D.

**SUBFILE** **CODE-** DAI

**PUBLISHER-** YLIOPISTOPAINO, VUORIKATU 3, HELSINKI, FINLAND

**Document** **Order** **Number-** AAIC069507

**Section-** European **Abstracts**

**LANGUAGE-** English **(DEF)**

Indirect immunohistochemical techniques were used to study the localization of different **neuroactive** substances in the sympathetic superior cervical ganglion (SCG) of the rat. The distribution of immunoreactivities to 5-hydroxytryptamine (5-HT), histamine, histidine decarboxylase, proenkephalin A-derived peptides and gamma-aminobutyric acid (GABA) metabolizing enzymes was examined in the SCG of both normal rats and after pharmacological and surgical manipulations. The results of this study indicate that 5-HT-immunoreactive cells appeared in the SCG on the 12th embryonic day. During the first 4 postnatal weeks of development, 5-HT immunoreactivity was present both in the small intensely fluorescent (SIF) cells and in a subpopulation of principal nerve (PN) cells. In normal adult rats, 5-HT immunoreactivity was localized only in SIF cells. 5-HT immunoreactivity was, however, also present in a subpopulation of PN cells and in nerve fibres of the SCG of adult rats after the postganglionic axonal flow had been blocked by ligation experiments or by colchicine. Moreover, 5-HT-immunoreactive PN and SIF cells as well as nerve fibres were present in the SCG after treatment with nialamide and L-tryptophan, even after they had been treated with a 5-HT uptake inhibitor, fluoxetine. 5-HT, histamine and histidine decarboxylase immunoreactivities were colocalized with tyrosine hydroxylase in SIF cells. These SIF cells occurred individually or in cell clusters, suggesting they have an interneuronal or neuroendocrine function. The proenkephalin A-derived peptides, Met<sup>1</sup>sp5-enkephalin-Arg<sup>2</sup>sp6-Phe<sup>7</sup> and Met<sup>1</sup>sp5-enkephalin-Arg<sup>2</sup>sp6-Gly<sup>3</sup>sp7-Leu<sup>8</sup>sp8, were localized immunohistochemically in the noradrenaline-containing PN cells and in nerve fibres. The nerve division and ligation experiments indicated that these nerve fibres were mainly of preganglionic origin, originating from the lower sympathetic ganglia and from the preganglionic sympathetic neurons of the spinal cord. A fraction of the immunoreactive nerve fibres originated from

the PN cells of the SCG. The postganglionic nerve trunks projecting to the sympathetic target tissues contained immunoreactivity to the proenkephalin A-derived peptides. The GABA-synthesizing enzyme L-glutamate decarboxylase was localized immunohistochemically in a subpopulation of PN and SIF cells and in some nerve fibres. The GABA-catabolizing enzyme GABA transaminase was localized in PN and SIF cells, nerve fibres and satellite cells.

**DESCRIPTOR(S)-** BIOLOGY, NEUROSCIENCE  
**SECTIONAL CLASSIFICATION CODE-** 0317 .

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**77. MODULATION OF THE FUNCTION OF ADENYLYL CYCLASE-LINKED SEROTONIN RECEPTORS BY ~~NEUROACTIVE~~ AGENTS AND NEURAL CELL MEMBRANE COMPONENTS.**

DIS 93-03-BK AAI0369953 NDN- 135-0018-6373-0

KRAVIS, ELIZABETH BERRY

VOL. X1984  
1983

**CORPORATE INSTITUTION** AUTHOR- THE UNIVERSITY OF CHICAGO  
Degree- CODE- 0330

**SUBFILE Document LANGUAGE-** CODE- ADD  
Order Number- AAI0369953  
English (DEF)

NO-ABSTRACT

**DESCRIPTOR(S)-** CHEMISTRY, BIOCHEMISTRY  
**SECTIONAL CLASSIFICATION CODE-** 0487 .

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Citations from Life Sciences Collection (LSC): LS1

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**78. GLUTAMATE, ASPARTATE, AND G-AMINOBUTYRATE TRANSPORT BY MEMBRANE VESICLES PREPARED FROM RAT BRAIN.**

LS1 81-09 04093 NDN- 071-0044-5737-6

ROSKOSKI, R. , JR.; RAUCH, N.; ROSKOSKI, L. M.

ARCH. BIOCHEM. BIOPHYS., 207(2), 407-415 (1981)  
DOCUMENT TYPE- JOURNAL ARTICLE: ORIG. RESEARCH  
AUTHOR AFFILIATION- DEP. BIOCHEM., LOUISIANA STATE UNIV. MED.  
CENT., NEW ORLEANS, LA 70112, USA  
LANGUAGE- ENGLISH

THE TRANSPORT OF GLUTAMATE, ASPARTATE, OR G-AMINOBUTYRIC ACID (GABA) IN SYNAPTOSOMES WAS TEMPERATURE DEPENDENT AND EXHIBITED SATURATION KINETICS WITH AN APPARENT K M OF 2.5 MM. THE RATES AND EXTENT OF L-GLUTAMATE AND L-ASPARTATE UPTAKE WERE EQUIVALENT AND WERE GREATER THAN THOSE FOR GABA. VALINOMYCIN INCREASED THE RATE OF UPTAKE OF EACH OF THESE SUBSTANCES SUGGESTING A ROLE FOR AN ELECTROGENIC COMPONENT IN TRANSPORT. CONSONANT WITH THIS NOTION, EXTERNAL K + AND Rb + DECREASED UPTAKE OF ALL 3 COMPOUNDS. EXTERNAL THIOCYANATE ALSO INCREASES THE RATE OF GLUTAMATE, ASPARTATE, AND GABA TRANSPORT. UPTAKE OF THESE NEUROACTIVE AMINO ACIDS WAS ABSOLUTELY DEPENDENT ON EXTERNAL Na +; NO OTHER MONOVALENT CATION TESTED SUBSTITUTES FOR IT. GRAMICIDIN D AND NIGERICIN INHIBIT GLUTAMATE TRANSPORT BY ABOLISHING BOTH THE Na + AND K + GRADIENTS. MONENSIN INHIBITS UPTAKE BY SELECTIVELY DISSIPATING THE Na + GRADIENT. FOR BOTH GLUTAMATE AND GABA TRANSPORT, THE Na + AND K + GRADIENTS ARE SYNERGISTIC AND NOT ADDITIVE...

DESCRIPTOR(S)- AMINO ACIDS; ASPARTATE; ASPARTIC ACID; BRAIN; DEP. BIOCHEM., LOUISIANA STAT; GLUTAMIC ACID; IRL13099PSY40; IRL13113X; NERVOUS SYSTEM; RATS

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**79. BIOCHEMICAL LOCALIZATION AND CHARACTERIZATION OF BOMBESIN-LIKE PEPTIDES IN DISCRETE REGIONS OF RAT BRAIN.**

LS1 81-08 95018 NDN- 071-0044-0567-4

MOODY, T. W.; O'DONOHUE, T. L.; JACOBOWITZ, D. M.

PEPTIDES, 2(1), 75-79 (1981)  
DOCUMENT TYPE- JOURNAL ARTICLE: ORIG. RESEARCH  
AUTHOR AFFILIATION- LAB. CLIN. SCI., BUILD. 10, ROOM 2D46, NIMH,  
BETHESDA, MD 20205, USA  
LANGUAGE- ENGLISH

A RADIOIMMUNOASSAY USING AN ANTISERUM WHICH RECOGNIZES THE C-TERMINAL OF BOMBESIN WAS USED TO DETERMINE THE REGIONAL

DISTRIBUTION OF BOMBESIN-LIKE PEPTIDES IN DISCRETE REGIONS OF RAT BRAIN. THE CONCENTRATION OF ENDOGENOUS BOMBESIN-LIKE PEPTIDES WAS 30-FOLD GREATER IN HIGH (SUBSTANTIA GELATINOSA TRIGEMINI, NUCLEUS TRACTUS SOLITARIUS, INTERPENDUNCULAR NUCLEUS AND ARCUATE NUCLEUS) THAN LOW REGIONS (CAUDATE, HIPPOCAMPUS AND CINGULATE CORTEX). WHEN BRAIN EXTRACTS WERE FRACTIONATED USING H.P.L.C. TECHNIQUES 2 MAJOR PEAKS OF IMMUNOREACTIVITY WERE OBTAINED, THE MORE HYDROPHOBIC PEPTIDE COELUTED WITH SYNTHETIC BOMBESIN. IT IS CONCLUDED THAT THE CURRENT EVIDENCE SUPPORTS THE CONTENTION THAT BOMBESIN MAY BE A **NEUROACTIVE** PEPTIDE IN THE BRAIN...

**DESCRIPTOR(S)**- CE; IRL16002PBOMBES; LAB. CLIN. SCI., BUILD. 10, R; LIKE; RATS

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**80. ANGIOTENSIN AND OTHER PEPTIDES IN THE CONTROL OF WATER AND SODIUM INTAKE.**

LS1 81-05 02933 NDN- 071-0039-7113-1

FITZSIMONS, J. T.

PROC. R. SOC. LOND., SER. B, 210(1178), 165-182 (1980)  
**DOCUMENT TYPE**- JOURNAL ARTICLE : REVIEW  
**AUTHOR AFFILIATION**- PHYSIOL. LAB., DOWNING STREET, CAMBRIDGE  
CB2 3EG, UK  
**LANGUAGE**- ENGLISH

SEVERAL **NEUROACTIVE** PEPTIDES HAVE BEEN IMPLICATED IN THIRST AND SODIUM APPETITE IN DIFFERENT SPECIES; THREE PEPTIDES ARE CONSIDERED: ANGIOTENSIN; ELEDOISIN; AND ANTIDIURETIC HORMONE. (39  
REFS.)..

**DESCRIPTOR(S)**- ANTIDIURETIC HORMONE; ELEDOISIN; ENDOCRINOLOGY; INTAKE; IRL25821PANGIOT; PHYSIOL. LAB., DOWNING STREET; REVIEW; WATER INTAKE

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**81. EFFECTS OF WATER POLLUTANTS AND OTHER CHEMICALS ON FISH ACETYLCHOLINESTERASE (IN VITRO).**

LS1 81-03 49880 NDN- 071-0037-9062-8

OLSON, D. L.; CHRISTENSEN, G. M.

ENVIRON. RES., 21(2), 327-335 (1980)

DOCUMENT TYPE- JOURNAL ARTICLE: ORIG. RESEARCH

AUTHOR AFFILIATION- US EPA, ENVIRON. RES. LAB., 6201 CONGDON BLVD., DULUTH, MN 55804, USA

LANGUAGE- ENGLISH

ACETYLCHOLINESTERASE (ACHE) PREPARATIONS FROM THE MUSCLE OF THE FATHEAD MINNOW ( PIMEPHALES PROMELAS ) WERE TREATED (IN VITRO) WITH 74 CHEMICALS OF VARIOUS CLASSES, MANY OF WHICH ARE ENVIRONMENTAL CONTAMINANTS, TO DETERMINE THEIR EFFECT UPON ENZYME ACTIVITY. A HIGHLY INHIBITORY EFFECT WAS FOUND WITH SEVERAL CARBAMATES, ONE ORGANOXY-PHOSPHATE, THE ARSENITE ION, AND CERTAIN HEAVY METAL CATIONS. INTERMEDIATE INHIBITION WAS FOUND WITH THE ARSENATE ION, OTHER METAL CATIONS, ORGANOMETALS, CERTAIN **NEUROACTIVE** AGENTS, ORGANOPHOSPHATES, AND ONE ORGANOCHLORIDE PESTICIDE. SEVERAL ORGANOCHLORIDE PESTICIDES, ALKALINE AND ALKALINE-EARTH CATIONS, A VARIETY OF ANIONS, SEVERAL DRUGS, AND OTHER CHEMICALS HAD LITTLE INHIBITORY EFFECT AT THE HIGHEST CONCENTRATION USED (0.01 M). THE EFFECT OF CHEMICALS IN MIXTURES OF KNOWN COMPOSITION WAS APPROXIMATELY ADDITIVE. NONE OF THE CHEMICALS TESTED CAUSED DETECTABLE ENZYME ACTIVATION...

DESCRIPTOR(S)- ACTIVITY; CHEMICAL POLLUTANTS; CYPRINIDAE; EFFECTS ON; ENZYMATIC ACTIVITY; IRL08504PSOLSON; IRL24155P; PIMEPHALES PROMELAS; PISCES; US EPA, ENVIRON. RES. LAB., 6; VITRO .

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82.

**NEUROACTIVE** PEPTIDES.

LS1

81-03

00123 NDN-

071-0037-5770-4

NO-AUTHOR

PROC. R. SOC. LOND., SER. B, 210(1178), 3-195 (1980)

DOCUMENT TYPE- JOURNAL : CONFERENCE PROCEEDINGS

LANGUAGE- ENGLISH

PAPERS ON THE STRUCTURE AND FUNCTION OF NEUROPEPTIDES; MOLECULAR EVOLUTION OF BIOLOGICALLY ACTIVE POLYPEPTIDES; CHARACTERIZATION OF OPIOID RECEPTORS IN NERVOUS TISSUE AND THE ENKEPHALINASES WERE PRESENTED AT THIS MEETING...

**DESCRIPTOR(S)- ADD; IRL16021X; IRL16027P8001; PEPTIDES .**

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**83. NEUROACTIVE PLANT AMINO ACIDS AND AMINES.**  
LS1 81-02 01221 NDN- 071-0035-9004-4

EVANS, C. S.; BELL, E. A.

TRENDS NEUROSCI., 3(3), 70-72 (1980)

**DOCUMENT TYPE- JOURNAL ARTICLE : REVIEW**

**AUTHOR AFFILIATION- DEP. PLANT SCI., UNIV. LONDON KING'S COLL., 68 HALF MOON LANE, LONDON SE24 9JF, UK**

**LANGUAGE- ENGLISH**

MANY PLANTS WHICH FORM AN IMPORTANT PART OF MAN'S DIET CONTAIN COMPOUNDS WHICH HAVE NEUROLOGICAL EFFECTS. THE NEUROACTIVITY OF SEVERAL NON-PROTEIN AMINO ACIDS AND AMINES WHICH OCCUR IN PLANTS CONSUMED BY MAN AND DOMESTIC ANIMALS ARE DESCRIBED...

**DESCRIPTOR(S)- ALI; AMINO ACIDS; DEP. PLANT SCI., UNIV. LONDON; EFFECTS ON; FOOD PLANTS; IRL24120PA; IRL24172X; NERVOUS SYSTEM; NERVOUS SYSTEM DISEASES .**

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**84. PURIFICATION AND PRIMARY STRUCTURE OF TWO NEUROACTIVE PEPTIDES THAT CAUSE BAG CELL AFTERDISCHARGE AND EGG-LAYING IN APLYSIA**

LS1 80-08 90792 NDN- 071-0029-6033-2

HELLER, E.; KACZMAREK, L. K.; HUNKAPILLER, M. W.; HOOD, L. E.; STRUMWASSER, F.

PROC. NATL. ACAD. SCI. USA, 77(4), 2328-2332 (1980)

**DOCUMENT TYPE- JOURNAL ARTICLE: ORIG. RESEARCH**

**AUTHOR AFFILIATION- DIV. BIOL., CALIFORNIA INST. TECHNOL., PASADENA, CA 91125, USA**

**LANGUAGE- ENGLISH**

THE PURIFICATION AND PRIMARY STRUCTURE OF 2 ATRIAL GLAND PEPTIDES, EACH OF WHICH IS ABLE TO INDUCE EGG LAYING IN RECIPIENT

APLYSIA ARE DESCRIBED. BOTH PEPTIDES ALSO INDUCE THE CHARACTERISTIC AFTERDISCHARGE OF THE BAG CELL NEURONS, SUGGESTING THAT THESE **NEUROACTIVE** PEPTIDES INDUCE EGG LAYING INDIRECTLY BY STIMULATING THE RELEASE OF EGG-LAYING HORMONE FROM THE BAG CELL NEURONS...

**DESCRIPTOR(S)-** AMINO ACID SEQUENCE; APLYSIA CALIFORNICA; DIV. BIOL., CALIFORNIA INST.; EGG LAYING; EGG LAYING HORMONE; INDUCTION; IRL16002X; IRL16003X; IRL16021PEGGLAY; VES .

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**85. SUSCEPTIBILITY OF **NEUROACTIVE** PEPTIDES TO AMINOPEPTIDASE DIGESTION IS RELATED TO MOLECULAR SIZE.**

LS1 80-05 56546 NDN- 071-0026-8140-6

AUSTEN, B. M.; EVANS, C. J.; SMYTH, D. G.

BIOCHEM. BIOPHYS. RES. COMMUN., 91(4), 1211-1217 (1979)

**DOCUMENT TYPE-** JOURNAL ARTICLE: ORIG. RESEARCH

**AUTHOR AFFILIATION-** NATL. INST. MED. RES., MILL HILL, LONDON NW7 1AA, UK

**LANGUAGE-** ENGLISH

PEPTIDE FRAGMENTS DERIVED FROM THE NH 2-TERMINUS OF CORTICOTROPIN EXHIBITED WIDELY DIFFERING DEGREES OF STABILITY TO DEGRADATION BY AMINOPEPTIDASE M. CORTICOTROPIN ITSELF WAS 135 TIMES MORE STABLE THAN ITS NH 2-TERMINAL PENTAPEPTIDE, AND SIMILAR DIFFERENCES IN STABILITY WERE OBSERVED WITH PEPTIDES DERIVED FROM THE B-CHAIN OF BOVINE INSULIN. ENKEPHALIN LINKED COVALENTLY TO THE A-CHAIN OF BOVINE INSULIN WAS AT LEAST 100 TIMES MORE STABLE THAN THE PENTAPEPTIDE. THE RESULTS DEMONSTRATE THAT THE MOLECULAR SIZE OF A PEPTIDE IS ONE FACTOR THAT DETERMINES ITS NH 2-TERMINAL STABILITY...

**DESCRIPTOR(S)-** CATTLE; CHAINS; IRL16021PCORTIC; NATL. INST. MED. RES., MILL H; 04X .

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**86. PARTIAL CHARACTERIZATION OF LETHAL AND **NEUROACTIVE** COMPONENTS OF THE BROWN RECLUSE SPIDER ( **LOXOSCELES RECLUSA** ) VENOM.**

LS1 80-03 39821 NDN- 071-0024-2985-7

FOIL, L. D.; FRAZIER, J. L.; NORMENT, B. R.

TOXICON, 17(4), 347-354 (1979)  
DOCUMENT TYPE- JOURNAL ARTICLE: ORIG. RESEARCH  
AUTHOR AFFILIATION- DEP. ENTOMOL., MISSISSIPPI AGRIC. AND FOR.  
EXP. STN., MISSISSIPPI STATE UNIV., MISSISSIPPI STATE, MS  
LANGUAGE- ENGLISH

L. RECLUSA VENOM WAS SEPARATED BY SEPHADEX G-50 GEL FILTRATION INTO THREE 280 NM ABSORBING PEAKS, 2 OF WHICH CONTAINED COMPONENTS LETHAL TO INSECTS. THE HEAVY MOLECULAR WEIGHT PROTEIN FOUND IN PEAK 1 CAUSED KNOCKDOWN AND MORTALITY IN MUSCA DOMESTICA (DIPT., MUSCIDAE) 20-24 H AFTER INJECTION. THE LOW MOL WT (<10,000) POLYPEPTIDE IN PEAK 2 WAS HEAT STABLE AT 90 C AND CAUSED KNOCKDOWN WITHIN 30 MIN AND MORTALITY WITHIN 4 H AFTER INJECTION. BOTH WHOLE VENOM AND PEAK 2 CONTAINED COMPONENTS WHICH CAUSED A DRAMATIC INCREASE IN THE AMPLITUDE AND FREQUENCY OF THE ENDOGENOUS ACTIVITY OF THE VENTRAL NERVE CORD OF PERIPLANETA AMERICANA (BLATT., BLATTIDAE). THE **NEUROACTIVE** FACTOR STIMULATED THIS ACTIVITY TO 680-FOLD AND WITH 5 MIN PRODUCED A BLOCK WHICH WAS REVERSIBLE BY SALINE IRRIGATION. GEL FILTRATION ELUTIONS OF THE LOW MOL WT LETHAL FACTOR AND THE **NEUROACTIVE** FACTOR OVERLAPPED BUT DID NOT COINCIDE...

**DESCRIPTOR(S)**- ARACHNIDAE; ARANAEAE; BLATTIDAE; BLATTODEA; DEP. ENTOMOL., MISSISSIPPI AG; DIPTERA; INSECTA; INSECTS; IRL05183PPARTCH; IRL24173PILOXOR; LOXOSCELES RECLUSA; MUSCA DOMESTICA; MUSCIDAE; NEUROTOXINS; PERIPLANETA AMERICANA; PROTEINS; TOXICITY; TOXICOLOGY

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87. CHARACTERIZATION OF B-ADRENERGIC RECEPTOR AND  
ADENYLYLATE CYCLASE IN CANINE CEREBELLUM.  
LS1 80-01 14893 NDN- 071-0022-0396-0

NISHIKORI, K.; MAENO, H.

ARCH. BIOCHEM. BIOPHYS., 195(2), 505-517 (1979)  
DOCUMENT TYPE- JOURNAL ARTICLE: ORIG. RESEARCH  
AUTHOR AFFILIATION- DEP. PHARMACOL. AND BIOCHEM., CENT. RES.  
LAB., YAMANOUCHI PHARMACEUTICAL CO. LTD., TOKYO 174, JAPAN  
LANGUAGE- ENGLISH

BINDING OF (-)-(3H)DIHYDROALPRENOLOL TO THE SYNAPTIC MEMBRANE FRACTIONS OF CANINE CEREBELLUM WAS RAPID AND REVERSIBLE. THE BINDING WAS OF HIGH AFFINITY AND SATURABLE. BOUND (-)-(3H)DIHYDROALPRENOLOL WAS DISPLACEABLE WITH B-ADRENERGIC AGONISTS AND ANTAGONISTS, BUT NOT WITH OTHER **NEUROACTIVE** SUBSTANCES. ADENYLYLATE CYCLASE OF THE MEMBRANES WAS STIMULATED AT MOST 3 TIMES BY B-ADRENERGIC AGONISTS, BUT NOT SIGNIFICANTLY BY THE OTHER **NEUROACTIVE** SUBSTANCES. GTP AND GUANYL-5'-YL IMIDODIPHOSPHATE (GPP(NH)P) WERE STRICTLY REQUIRED FOR B-ADRENERGIC STIMULATION OF ADENYLYLATE CYCLASE WITH THEIR OPTIMUM CONCENTRATIONS OF 50 MM. THE AFFINITIES OF B-ADRENERGIC LIGANDS INCLUDING SOME STEREOISOMERS FOR (-)-(3H)DIHYDROALPRENOLOL BINDING SITES WERE VERY SIMILAR TO THOSE FOR ADENYLYLATE CYCLASE IN THE PRESENCE OF GTP. BINDING OF B-ADRENERGIC AGONISTS TO THE MEMBRANES EXHIBITED AN APPARENT NEGATIVE COOPERATIVITY WHICH WAS ENTIRELY ABOLISHED BY ADDITION OF EITHER GTP OR GPP(NH)P. BOTH (-)-ISOPROTERENOL-STIMULATED ADENYLYLATE CYCLASE ACTIVITY AND BINDING OF (-)-(3H)DIHYDROALPRENOLOL WERE NOT AffECTED BY B 1-SELECTIVE ANTAGONISTS AT CONCENTRATIONS WHICH COMPLETELY INHIBIT PERIPHERAL B 1-RESPONSES IN VITRO, WHEREAS B 2-SELECTIVE AGONISTS NOT ONLY STIMULATED ADENYLYLATE CYCLASE BUT ALSO COMPETITIVELY INHIBITED BINDING OF (-)-(3H)DIHYDROALPRENOLOL. CANINE CEREBELLAR ADENYLYLATE CYCLASE MAY BE COUPLED SPECIFICALLY WITH B 2-ADRENERGIC RECEPTOR...

**DESCRIPTOR(S)**- ADENYLYLATE CYCLASE; BRAIN; DEP. PHARMACOL. AND BIOCHEM.; DOGS; IRA; IRL13031PAD113B; IRL13182X; RECEPTORS .

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88. **NEUROACTIVE DRUGS INHIBIT TRYPSIN AND OUTER MEMBRANE PROTEIN PROCESSING IN ESCHERICHIA COLI K-12.**  
LS1 79-10 04588 NDN- 071-0020-3959-9

GAYDA, R. C.; HENDERSON, G. W.; MARKOVITZ, A.

PROC. NATL. ACAD. SCI. USA, 76(5), 2138-2142 (1979)  
**DOCUMENT TYPE-** JOURNAL ARTICLE: ORIG. RESEARCH  
**AUTHOR AFFILIATION-** DEP. MICROBIOL., UNIV. CHICAGO, CHICAGO, IL 60637, USA  
**LANGUAGE-** ENGLISH

THE 42-KDAL POLYPEPTIDE M1 WAS SHOWN TO BE THE PRECURSOR OF

THE 40-KDAL OUTER MEMBRANE POLYPEPTIDE M2. THE PRECURSOR CAN BE FOUND IN THE OUTER MEMBRANE FRACTION. THE EFFECT OF A NUMBER OF LOCAL ANESTHETICS (PROCAINE, PIPEROCAINE, LIDOCAINE, COCAINE) AND OTHER **NEUROACTIVE** DRUGS (E.G. ATROPINE, NEOSTIGMINE), AS WELL AS CLASSICAL TRYPSIN INHIBITORS (NATOSYLLYSINE CHLOROMETHYL KETONE AND BENZAMIDINE), ON THE CONVERSION OF M1 TO M2 IN MINICELLS CONTAINING PLASMID PMC44 WAS ALSO EXAMINED. MANY OF THESE COMPOUNDS INHIBITED THE PROCESSING AND MOST WERE SHOWN TO BE COMPETITIVE INHIBITORS OF TRYPSIN...

**DESCRIPTOR(S)**- ANAESTHETICS; ATROPINE; CELL ENVELOPES; COC; DEP. MICROBIOL., UNIV. CHICAG; EFFECTS ON; ESCHERICHIA COLI; ESCHERICHIA COLI K12; IRL02069P293COL; IRL13021X; IRL13140X; IRL13170P101ESC; LOCAL ANAESTHETICS; MEMBRANE BIOSYNTHESIS; NEOSTIGMINE; OUTER MEMBRANES; PLASMID PMC44; PROTEIN A; PROTEIN BIOSYNTHESIS; PROTEIN TURNOVER .

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**89. ANORECTIC EFFECT OF CHLORDIMEFORM IN THE AMERICAN COCKROACH.**

LS1 79-07 70102 NDN- 071-0017-3355-1

BEEMAN, R. W.; MATSUMURA, F.

J. ECON. ENTOMOL., 71(6), 859-861 (1978)  
DOCUMENT TYPE- JOURNAL ARTICLE: ORIG. RESEARCH  
AUTHOR AFFILIATION- PESTIC. RES. CENT., MICHIGAN STATE UNIV., EAST  
LANSING, MI 48824, USA  
LANGUAGE- ENGLISH

CHLORDIMEFORM AND SEVERAL OTHER **NEUROACTIVE** AMINES WERE ASSAYED FOR ANORECTIC ACTIVITY IN STARVED AMERICAN COCKROACHES, PERIPLANETA AMERICANA (BLATT., BLATTIDAE). OF 9 COMPOUNDS TESTED, CHLORDIMEFORM WAS THE MOST POTENT, CAUSING A 78% REDUCTION IN FOOD CONSUMPTION AFTER A DOSE OF 1 MG. OCTOPAMINE ALSO WAS A POTENT ANOREXIGENIC AGENT, WHEREAS THE OCTOPAMINE ANALOGUE ISOPROTERENOL WAS DEVOID OF ANORECTIC ACTIVITY. NO CORRELATION EXISTED BETWEEN ANORECTIC POTENCY AND EITHER ACUTE TOXICITY, MONOAMINE OXIDASE INHIBITORY ACTIVITY, OR LOCAL ANAESTHETIC ACTIVITY...

**DESCRIPTOR(S)**- BLATTIDAE; BLATTODEA; COCKROACH;

IRL05036PANOREF; NERVES; PERIPLANETA AMERICANA; PESTIC. RES. CENT., MICHIGAN; TOXICITY .

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90. DRUG-INDUCED PULMONARY DISEASE.  
LS1 79-07 07254 NDN- 071-0016-5278-2

FILIPEK, W. J.

POSTGRAD. MED., 65(2), 131-140 (1979)  
DOCUMENT TYPE- JOURNAL ARTICLE : REVIEW  
AUTHOR AFFILIATION- 919 E JEFFERSON BLVD., SOUTH BEND, IN 46622, USA  
LANGUAGE- ENGLISH

PULMONARY DISORDERS APPEARING AS MANIFESTATIONS OF ADVERSE REACTIONS TO MEDICATIONS ADMINISTERED ORALLY OR PARENTERALLY ARE REVIEWED. THE MECHANISMS INVOLVE TOXICITY, IDIOSYNCRASY, ALLERGY, OR A COMBINATION. THE DRUGS AND MEDICATIONS INCLUDE COMMONLY USED ANTIMICROBIAL, ANTINEOPLASTIC, ANALGESIC, VASOACTIVE, NEUROACTIVE, AND ENDOCRINE AGENTS. FOR MOST REACTIONS THE MECHANISMS ARE UNIDENTIFIED...

DESCRIPTOR(S)- DISEASE; IRL24113P; LUNG; MAN; OUN; RESPIRATORY TRACT; REVIEW; SIDE EFFECTS; 919 E JEFFERSON BLVD., SOUTH .

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91. NET UPTAKE OF ASPARTATE BY A HIGH-AFFINITY RAT CORTICAL SYNAPTOSOMAL TRANSPORT SYSTEM.

LS1 79-06 65765 NDN- 071-0015-8774-1

ROSKOSKI, R. , JR.

BRAIN RES., 160(1), 85-93 (1978)  
DOCUMENT TYPE- JOURNAL ARTICLE: ORIG. RESEARCH  
AUTHOR AFFILIATION- DEP. BIOCHEM., UNIV. IOWA, IOWA CITY, IA 52242, USA  
LANGUAGE- ENGLISH

REUPTAKE OF NEUROACTIVE AMINO ACIDS BY HIGH AFFINITY TRANSPORT SYSTEMS IS THOUGHT TO TERMINATE THE ACTION OF THESE

SUBSTANCES. SINCE HOMOEXCHANGE CAN COMPLICATE THE INTERPRETATION OF UPTAKE EXPERIMENTS, IT IS NECESSARY TO DEMONSTRATE NET INWARD TRANSPORT OF NEUROACTIVE AMINO ACIDS BEFORE UPTAKE CAN BE CONSIDERED AS A LIKELY MECHANISM FOR TRANSMITTER INACTIVATION. WHEN RAT CORTICAL SYNAPTOSOMES ARE INCUBATED WITH 10 MM ( 1 4C)L-ASPARTATE, NET (CHEMICAL) AND APPARENT (RADIOACTIVE) UPTAKE INTO THE SYNAPTOSOMAL FRACTIONS ARE EQUIVALENT. ALTHOUGH THERE IS NET ASPARTATE UPTAKE INTO THE SYNAPTOSOME FRACTION, ASPARTATE EXCHANGE CAN BE DEMONSTRATED IN A VARIETY OF CONDITIONS. NET UPTAKE EXHIBITS THE CHARACTERISTICS OF HIGH-AFFINITY TRANSPORT SYSTEMS INCLUDING  $Na^+$  AND TEMPERATURE-DEPENDENCE. FURTHERMORE, KCL (OR RBCL) ARE REQUIRED FOR NET UPTAKE BUT NOT RADIOACTIVE OR APPARENT UPTAKE. LiCl, NH<sub>4</sub>Cl, CsCl, AND CHOLINE CHLORIDE FAIL TO SUPPORT NET UPTAKE. OUABAIN INHIBITS ASPARTATE UPTAKE (AND VICE VERSA), THE NET UPTAKE OF THE COMBINATION IS GREATER THAN THAT OF EACH ALONE. THE DEMONSTRATION OF NET UPTAKE OF ASPARTATE BY A HIGH-AFFINITY SYSTEM IS CONSONANT WITH THE IDEA THAT THIS SYSTEM MAY PLAY A ROLE IN ITS INACTIVATION IN THE SYNAPTIC REGION...

**DESCRIPTOR(S)-** ASPARTATES; BRAIN; CORTEX; DEP. BIOCHEM., UNIV. IOWA, IO; IRL13099PSY40; RATS .

## 92. ION-SENSITIVE ATP-PHOSPHORYLATION PROCESSES IN THE AXONIC MEMBRANE OF THE SQUID RETINAL NERVE.

LS1 79-04 42358 NDN- 071-0014-3542-4

MATSUMURA,

F.

COMP. BIOCHEM. PHYSIOL., 58C(1), 13-20 (1977)

**DOCUMENT TYPE-** JOURNAL **ARTICLE:** **ORIG.** **RESEARCH**

**AUTHOR AFFILIATION**- DEP. ENTOMOL., UNIV. WISCONSIN, MADISON, WI

53706, USA

## LANGUAGE- ENGLISH

METHODS WERE DEVELOPED TO STUDY THE PROPERTIES OF ION-SENSITIVE ACCEPTORS OF THE TERMINAL (G) PHOSPHATE OF ATP IN THE AXON-RICH RETINAL NERVE PREPARATION OF THE SQUID *LOLIGO PEALEI*. THE BULK OF ION-SENSITIVE PHOSPHORYLATION ACTIVITIES WERE DUE TO CN<sup>-</sup> (2 MM) AND OUABAIN (10<sup>-4</sup> M) SENSITIVE SYSTEMS. BY USING DIFFERENT ION COMBINATIONS AND NEUROACTIVE AGENTS, SEVERAL TYPES OF PHOSPHORYLATION SYSTEMS WERE RECOGNIZED...

**descriptor(s)-** AXONS; DEP. ENTOMOL., UNIV. WISCONSI; IRL13113X;  
IRL13182PATPANA; LOLIGO PEALEI; MEMBRANE PHOSPHORYLATION; SHI

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**93. SYMPOSIUM ON CURRENT TOPICS IN DRUG RESEARCH. (HELD AT  
UPPSALA, SWEDEN ON OCTOBER 19-21, 1977).**

LS1            78-08            01071 NDN-            071-0006-2743-3

NO-AUTHOR

ACTA PHARM. SUEC., 14(SUPPL), 1-68 (1977)  
**DOCUMENT TYPE-** JOURNAL : CONFERENCE PROCEEDINGS  
**LANGUAGE-** ENGLISH

ABSTRACTS OF THIS SYMPOSIUM HAVE BEEN PUBLISHED AND INCLUDE THE FOLLOWING RELEVANT PLENARY LECTURES: SMALL PEPTIDES AS POSSIBLE NEUROTRANSMITTERS IN THE NERVOUS SYSTEM; EVIDENCE FOR INDIRECT ACTIONS OF (GLN 4)-NEUROTENSIN; PERSPECTIVES AND PROSPECTIVES ON PEPTIDE HORMONES; CENTRAL AND HORMONAL EFFECT OF MIF, TRH AND ANALOGUES; ENKEPHALIN-LIKE PEPTIDES STRUCTURE-ACTIVITY STUDIES; THE ENDORPHINS, A NEW CLASS OF NEUROACTIVE AGENTS. THE FOLLOWING RELEVANT POSTER SESSIONS WERE ALSO HELD: STUDIES OF MONOAMINE OXIDASE USING IRREVERSIBLE ENZYME INHIBITORS; ISOLATION AND PROPERTIES OF LIGATOXIN A, A TOXIC PROTEIN FROM MISTLETOE PHORADENDRON LIGA ; HIGH PERFORMANCE LIQUID CHROMATOGRAPHY OF POLYPEPTIDES; STRUCTURAL FEATURES OF ANTITHROMBIN III AS RELATED TO ITS BINDING OF HEPARIN; STUDIES ON THE MECHANISM OF THE RATE ENHANCING EFFECT OF HEPARIN ON THE THROMBIN-ANTITHROMBIN III REACTION; AFFINITY OF HEPATITIS B SURFACE ANTIGEN TO HYDROPHOBIC AND HYDROPHILIC GEL MATRICES...

**descriptor(s)-** HELD; IRL16027P7710; PROCEEDINGS; RESEARCH; TU;  
UPPSALA; 19-21

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Citations from MEDLINE(R) DATABASE (1980 TO 1984): ME5

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**94. A single gene encodes multiple neuropeptides mediating a stereotyped behavior.**

MED 83-06 83129416 NDN- 008-0073-0432-0

Scheller, R. H.; Jackson, J. F.; McAllister, L. B.; Rothman, B. S.; Mayeri, E.; Axel, R.

<b>JOURNAL</b>	<b>NAME-</b>	Cell	
<b>VOL.</b>	32		
<b>NO.</b>	1		
1983	Jan		
<b>PP.</b>	7-22		
<b>DOCUMENT</b>	<b>TYPE-</b>	<b>JOURNAL</b>	<b>ARTICLE</b>
<b>JOURNAL</b>	<b>CODE-</b>	CQ4	
<b>JOURNAL</b>	<b>SUBSET-</b>	MEDJSM	
<b>ISSN-</b>	0092-8674		
<b>PUBLICATION</b>	<b>COUNTRY-</b>	UNITED	STATES
<b>LANGUAGE-</b>	English		

Egg laying in Aplysia is characterized by a stereotyped behavioral array which is mediated by several **neuroactive** peptides. We have sequenced two genes encoding the A and B peptides thought to initiate the egg-laying process, as well as a gene encoding egg-laying hormone (ELH) which directly mediates the behavioral array. The three genes share 90% sequence homology and are representatives of a small multigene family. Each gene encodes a protein precursor in which the active peptides are flanked by internal cleavage sites providing the potential to generate multiple small peptides. Each of the three genes consists of sequences homologous to A or B peptide as well as ELH. Although these genes share significant nucleotide homology, they have diverged such that different member genes express functionally related but nonoverlapping sets of **neuroactive** peptides in different tissues.

**CHECK TAG(S)-** Animal; Female; Support, Non-U.S. Gov't; Support, U.S. Gov't, P.H.S.

**MEDICAL DESCRIPTOR(S)-** \*Aplysia --PH; \*Behavior, Animal --PH; \*Invertebrate Hormones --GE Aplysia --GE; Base Sequence; Gene Expression Regulation; Genes, Structural; Nerve Tissue Proteins --GE; Oviposition; Protein Precursors --GE

**CAS REGISTRY/EC NUMBER(S)-** \*0; \*0; \*0

**CAS SUBSTANCE NAME(S)-** Invertebrate Hormones; Nerve Tissue Proteins; Protein Precursors

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**95. Effect of chronic vasopressin treatment on alcohol drinking of Brattleboro HZ and DI rats.**

MED 84-02 84041958 NDN- 008-0072-8509-0

Myers, R. D.; Critcher, E. C.; Cornwell, N. N.

<b>JOURNAL</b>	<b>NAME-</b>	Peptides	
<b>VOL.</b>	4		
<b>NO.</b>	3		
1983	May-Jun		
<b>PP.</b>	359-66		
<b>DOCUMENT</b>	<b>TYPE-</b>	<b>JOURNAL</b>	<b>ARTICLE</b>
<b>JOURNAL</b>	<b>CODE-</b>	PA7	
<b>JOURNAL</b>	<b>SUBSET-</b>	MEDJSIM	
<b>ISSN-</b>	0196-9781		
<b>CONTRACT/GRANT</b>	<b>NUMBER-</b>	AA	04200.AA.NIAAA
<b>LAST REVISION</b>	<b>DATE</b>	(VENDOR'S)-	860610
<b>PUBLICATION</b>	<b>COUNTRY-</b>	UNITED	STATES
<b>LANGUAGE-</b>	English		

Preference for alcohol was determined for three groups of male and female rats, 100-150 days old, comprised of: (1) Long Evans (LE); (2) LE-derived Brattleboro heterozygous (HZ); and (3) Brattleboro homozygous (DI) animals afflicted with diabetes insipidus due to vasopressin deficiency. Each alcohol drinking test was run over 11 days during which food, water and an ethyl alcohol solution, increased in concentration from 3% to 25%, were freely available. Following an initial preference screen, 100 milli-units of vasopressin tannate in oil was administered subcutaneously, during a second preference test, once per day to each animal. This treatment ameliorated the polydipsia-polyuria syndrome characteristic of the DI sub-strain of Brattleboro rat. Administration of the peptide to both the LE or HZ animals exerted no effect on g/kg intake nor on the proportional measure of alcohol to water. However, in the DI rat of either gender, vasopressin reduced the mean absolute gram intake of alcohol over concentrations to resemble that of the other LE and/or HZ groups. These results demonstrate that vasopressin serves to normalize the intake of alcohol in the DI rat by virtue of the elimination of the diabetic condition. However, since vasopressin fails to alter alcohol consumption of the HZ and LE rats, it would appear that this neuroactive peptide may play only a minor role in the CNS mechanisms governing the voluntary selection of alcohol.

**CHECK TAG(S)-** Animal; Comparative Study; Female; Human; Male; Support, Non-U.S. Gov't; Support, U.S. Gov't, P.H.S.

**MEDICAL DESCRIPTOR(S)-** \*Alcohol Drinking; \*Diabetes Insipidus --PP; \*Vasopressins --PD Alcoholism --DT; Alcoholism --ET; Diabetes Insipidus --DT; Diabetes Insipidus --GE; Rats; Vasopressins --DF

**CAS REGISTRY/EC NUMBER(S)-** \*0

**CAS SUBSTANCE NAME(S)-** Vasopressins .

MED 84-02 84040529 NDN- 008-0072-8484-9

Gammon, D. W.; Ruzo, L. O.; Casida, J. E.

JOURNAL	NAME-	Neurotoxicology
VOL.	4	
NO.	2	
1983	Summer	
PP.	165-9	
DOCUMENT	TYPE-	JOURNAL ARTICLE
JOURNAL	CODE-	OAP
JOURNAL	SUBSET-	MEDJSM
ISSN-	0161-813X	
CONTRACT/GRANT	NUMBER-	PO1 ES00049.ES.NIEHS
PUBLICATION	COUNTRY-	UNITED STATES
LANGUAGE-	English	

The analog of cis-tetramethrin with a 2,2-dimethyl-cyclopropyl replacement for the 2-methyl-1-propenyl group, i.e., "methanotetramethrin., is one of the most neuroactive compounds ever described. It is 10(3)- to greater then 10(5)-fold more potent than tetramethrin in inducing repetitive firing following stimulation in a cockroach cercal sensory nerve in vitro, and the repetitive firing is considerably more persistent. Also, it is more toxic to the cockroach and the housefly. The remarkable potency of methanotetramethrin, giving consistent repetitive firing in this nerve assay at 10(-18) M, and the speculation that it may undergo reversible covalent binding via Michael addition indicate that it could be a useful neurophysiological probe and candidate affinity label for the sodium channel.

CHECK TAG(S)- Animal; Male; Support, U.S. Gov't, P.H.S.  
MEDICAL DESCRIPTOR(S)- \*Axons --DE; \*Insecticides --PD; \*Pyrethrins --PD  
Cockroaches; Electric Stimulation; Houseflies  
CAS REGISTRY/EC NUMBER(S)- \*0; \*0; \*88108-86-5  
CAS SUBSTANCE NAME(S)- Insecticides; Pyrethrins; methanotetramethrin .

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**97. Estrogenic maintenance of lordotic responsiveness: requirement for hypothalamic action potentials.**

MED 83-10 83232335 NDN- 008-0063-4446-2

Harlan, R. E.; Shivers, B. D.; Kow, L. M.; Pfaff, D. W.

JOURNAL	NAME-	Brain	Res
VOL.	268		
NO.	1		

1983	May	23
PP.	67-78	
DOCUMENT	TYPE- JOURNAL	ARTICLE
JOURNAL	CODE- B5L	
JOURNAL	SUBSET- MEDJSM	
ISSN-	0006-8993	
CONTRACT/GRANT NUMBER- HD 05585.HD.NICHD; HD 05737.HD.NICHD; HD 05751.HD.NICHD		
PUBLICATION	COUNTRY- NETHERLANDS	
LANGUAGE-	English	

Studies were conducted to determine the requirement for hypothalamic, sodium current-based action potentials in the performance of a stereotypic, estrogen-dependent reflex, the lordosis response. Intrahypothalamic infusion of local anesthetics (50% procaine or 0.5% bupivacaine) into conscious rats had no effect on lordotic responsiveness, and, in a separate group of urethane-anesthetized rats, depressed multiunit electrical activity temporarily. Intrahypothalamic infusion of tetrodotoxin into conscious rats, however, resulted in a dose-dependent, reversible decline in lordotic responsiveness. The first significant drop in lordotic responsiveness occurred 40 min after infusion; the minimum was reached 2-4 h after infusion. Recovery of lordotic responsiveness to preinfusion levels was complete by 12-24 h after infusion. Electrophysiological studies in a separate group of urethane-anesthetized rats revealed that intrahypothalamic tetrodotoxin infusion in most cases suppressed multiunit activity completely usually within 6 min, and this suppression lasted for at least several hours. These data indicate that large, prolonged decreases in electrical activity in the hypothalamus, where estrogenic action is necessary and sufficient to induce lordosis, result in a gradual, reversible decline in lordotic responsiveness. These data are consistent with a 'tonic' rather than a 'mount-by-mount' role of hypothalamic neurons in lordosis. Furthermore, since lordotic responsiveness declined only when hypothalamic electrical activity had been disrupted severely for at least 40 min, it is postulated that the **neuroactive** products released by lordosis-relevant, hypothalamic neurons may have a duration of action of at least several minutes.

**CHECK TAG(S)-** Animal; Female; Support, U.S. Gov't, P.H.S.  
**MEDICAL DESCRIPTOR(S)-** \*Estrogens --PH; \*Hypothalamus --PH; \*Sex Behavior, Animal --PH Action Potentials --DE; Anesthetics, Local --PD; Rats; Sex Behavior, Animal --DE; Tetrodotoxin --PD  
**CAS REGISTRY/EC NUMBER(S)-** \*0; \*0; \*4368-28-9  
**CAS SUBSTANCE NAME(S)-** Anesthetics, Local; Estrogens; Tetrodotoxin .

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**98. Pituitary responses to a **neuroactive** tripeptide (TRH) in Friedreich's ataxia families.**

MED	82-12	82258718 NDN-	008-0058-7384-0
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Tolis, G.; Mehta, A.; Andermann, E.; Harvey, C.; Barbeau, A.

JOURNAL	NAME-	Can	J	Neurol	Sci
VOL.		9			
NO.		2			
1982		May			
PP.		189-90			
DOCUMENT	TYPE-	JOURNAL	ARTICLE		
JOURNAL	CODE-		CJ9		
JOURNAL	SUBSET-		MEDJSM		
ISSN-		0317-1671			
PUBLICATION	COUNTRY-		CANADA		
LANGUAGE-		English			

Oral glucose tolerance, thyroid function tests, as well as thyrotropin, prolactin and growth hormone release after administration of thyrotropin releasing hormone, were evaluated in patients with Friedreich's ataxia and unaffected family members. Impaired glucose tolerance was found in the majority of family members, affected or not. Thyroid hormone levels and PRL and TSH responses to TRH, were similar in all and normal. However, GH responses to TRH were abnormal in half of the patients, but in none of the unaffected family members. Paradoxical responses to neuropeptides may characterize some Friedreich's ataxia patients, and may predict the possibility of therapeutic maneuvers with such peptides in these patients.

CHECK	TAG(S)-	Human
MEDICAL DESCRIPTOR(S)-	*Friedreich's Ataxia --DI; *Prolactin --BL; *Protirelin --DU; *Somatotropin --BL; *Thyrotropin --BL	Adolescence; Adult; Aged; Friedreich's Ataxia --BL; Friedreich's Ataxia --GE; Middle Age
CAS REGISTRY/EC NUMBER(S)-	*24305-27-9; *9002-62-4; *9002-71-5; *9002-72-6	
CAS SUBSTANCE NAME(S)-	Protirelin; Prolactin; Thyrotropin; Somatotropin	.

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**99. Chemical heterogeneity in cerebellar Purkinje cells: existence and coexistence of glutamic acid decarboxylase-like and motilin-like immunoreactivities.**

MED 82-07 82150957 NDN- 008-0052-2819-3

Chan-Palay, V.; Nilaver, G.; Palay, S. L.; Beinfeld, M. C.; Zimmerman, E. A.; Wu, J. Y.; O'Donohue, T. L.

JOURNAL	NAME-	Proc	Natl	Acad	Sci	U	S	A
VOL.			78					
NO.			12					
1981			Dec					

PP.	7787-91		
DOCUMENT	TYPE-	JOURNAL	ARTICLE
JOURNAL	CODE-	PV3	
JOURNAL	SUBSET-	MEDJSM	
ISSN-	0027-8424		
CONTRACT/GRANT NUMBER- NS 03659.NS.NINDS; NS 14740.NS.NINDS			
PUBLICATION	COUNTRY-	UNITED	STATES
LANGUAGE-	English		

Purkinje neurons of the cerebellar cortex from a chemically and morphologically heterogeneous population containing some members that have gamma-aminobutyric acid (GABA), others that have immunoreactivity for motilin, and a small number that have both. The remaining 30-40% of all Purkinje cells have neither of these two neuroactive substances, leaving possibilities for other transmitter candidates. The evidence was compiled from double-staining immunocytochemical procedures performed on single sections of the cerebellum and brain stem in rat, mouse, and monkey. Two polyclonal antibodies were applied in succession, one directed against the midregion and COOH terminus of the 22-amino acid polypeptide motilin and the other against glutamic acid decarboxylase (glutamate decarboxylase; L-glutamate 1-carboxy-lyase, EC 4.1.1.15), the rate-limiting enzyme in the synthesis of the neurotransmitter GABA. The staining combinations employed the immunoperoxidase method, with different chromogens for distinguishing the motilin-like immunoreactivity from glutamic acid decarboxylase immunoreactivity by different colors, or the immunoperoxidase method for one antiserum and immunofluorescence for the other. The locations of both motilin and GABA cell types were mapped. The recognition of motilin in Purkinje cells calls for experimental definition of the role of this substance in the cerebellum and for reevaluation of the roles of Purkinje cells and of GABA in cerebellar function. The significant motilin representation in the flocculus, paraflocculus, and vermis suggests that it may be the Purkinje cell mediative chemical in the vestibular parts of the cerebellum. However, the presence of GABA as well in the same regions indicates that the chemical preference may be at least bimodal.

**CHECK TAG(S)-** Animal; Support, Non-U.S. Gov't; Support, U.S. Gov't, P.H.S.  
**MEDICAL DESCRIPTOR(S)-** \*Carboxy-Lyases --ME; \*Cerebellum --ME;  
 \*Gastrointestinal Hormones --ME; \*Glutamate Decarboxylase --ME; \*Motilin --ME;  
 \*Purkinje Cells --ME Cerebellum --CY; Glutamate Decarboxylase --IM; Immunologic  
 Techniques; Macaca fascicularis; Mice; Motilin --IM; Rats  
**CAS REGISTRY/EC NUMBER(S)-** \*EC-4.1.1.; \*EC-4.1.1.15; \*0; \*52906-92-0  
**CAS SUBSTANCE NAME(S)-** Carboxy-Lyases; Glutamate Decarboxylase;  
 Gastrointestinal Hormones; Motilin .

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100. Synthesis and secretion of hemolysin by *Escherichia coli*.  
 MED 81-02 81026241 NDN- 008-0048-8629-2

Springer,	W.;	Goebel,	W.
<b>JOURNAL</b>	<b>NAME-</b>	J	Bacteriol
<b>VOL.</b>		144	
<b>NO.</b>		1	
1980		Oct	
<b>PP.</b>		53-9	
<b>DOCUMENT</b>	<b>TYPE-</b>	JOURNAL	ARTICLE
<b>JOURNAL</b>	<b>CODE-</b>		HH3
<b>JOURNAL</b>	<b>SUBSET-</b>		MEDJSM
<b>ISSN-</b>		0021-9193	
<b>PUBLICATION</b>	<b>COUNTRY-</b>	UNITED	STATES
<b>LANGUAGE-</b>		English	

Hemolytic Escherichia coli cells were found to synthesize and secrete significant amounts of hemolysin into a mineral salt-glucose medium containing hemoglobin. The release of de novo-synthesized hemolysin was stopped in the presence of energy metabolism inhibitors such as 2,4-dinitrophenol, sodium azide, or potassium cyanide, resulting in an accumulation of intracellular hemolysin. A similar effect was observed in the presence of procaine, a **neuroactive** drug which inhibits the processing of exoproteins. Small amounts of hemolysin were secreted into the medium within approximately 10 min of inhibition of protein synthesis by chloramphenicol. This represented the final release of preformed periplasmic hemolysin en route to secretion through the outer membrane and was not caused by adsorption of external hemolysin to the cell surface. This secretion was not energy dependent but was inhibited above pH 8 and at low temperatures (10 to 20 degrees C). We concluded that two transport processes are involved in hemolysin secretion. De novo-synthesized hemolysin is extruded by an energy-dependent process through the cytoplasmic membrane and probably requires processing. In the periplasmic space a small internal pool of preformed hemolysin is accumulated temporarily before being transported through the outer membrane. Release of hemolysin through the outer membrane does not require energy or de novo protein synthesis.

<b>CHECK</b>	<b>TAG(S)-</b>	Support,	Non-U.S.	Gov't
<b>MEDICAL DESCRIPTOR(S)-</b> *Escherichia coli --ME; *Hemolysins --ME Azides --PD; Chloramphenicol --PD; Dinitrophenols --PD; Escherichia coli --GD; Hydrogen-Ion Concentration; Potassium Cyanide --PD; Procaine --PD; Temperature				
<b>CAS REGISTRY/EC NUMBER(S)-</b> *0; *0; *0; *151-50-8; *56-75-7; *59-46-1				
<b>CAS SUBSTANCE NAME(S)-</b> Azides; Dinitrophenols; Hemolysins; Potassium Cyanide; Chloramphenicol; Procaine .				

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101. Hypothesis: genes and **neuroactive** peptides from food as cause of schizophrenia.

MED 80-11 80238979 NDN- 008-0048-4722-5  
 Dohan, F. C.  
**JOURNAL** NAME- Adv Biochem Psychopharmacol  
**VOL.** 22  
 1980  
**PP.** 535-48  
 51 reference(s)  
**DOCUMENT** TYPE- JOURNAL ARTICLE; REVIEW  
**JOURNAL** CODE- 2I8  
**JOURNAL** SUBSET- MEDJSM  
**ISSN-** 0065-2229  
**PUBLICATION** COUNTRY- UNITED STATES  
**LANGUAGE-** English

NO-ABSTRACT

**CHECK** TAG(S)- Animal; Human  
**MEDICAL DESCRIPTOR(S)-** \*Dietary Proteins --AE; \*Peptides --AE;  
 \*Schizophrenia --ET Behavior, Animal --DE; Celiac Disease --CO; Cereals; Dietary  
 Proteins --AN; Dietary Proteins --ME; Endorphins --AN; Gliadin --PD; Gluten --PD;  
 Gluten --TO; Schizophrenia --CI; Schizophrenia --DH; Schizophrenia --GE  
**CAS REGISTRY/EC NUMBER(S)-** \*0; \*0; \*0; \*8002-80-0; \*9007-90-3  
**CAS SUBSTANCE NAME(S)-** Dietary Proteins; Endorphins; Peptides; Gluten; Gliadin

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**102. Proline transport by synaptosomal membrane vesicles isolated from rat brain: energetics and inhibition by free fatty acids.**  
 MED 83-03 83048985 NDN- 008-0032-9779-5

Rhoads, D. E.; Peterson, N. A.; Raghupathy, E.  
**JOURNAL** NAME- Biochemistry  
**VOL.** 21  
**NO.** 19  
 1982 Sep 14  
**PP.** 4782-7  
**DOCUMENT** TYPE- JOURNAL ARTICLE  
**JOURNAL** CODE- A0G  
**JOURNAL** SUBSET- MEDJSM  
**ISSN-** 0006-2960  
**CONTRACT/GRANT** NUMBER- NS15659.NS.NINDS

**PUBLICATION  
LANGUAGE-**

**COUNTRY-**

UNITED  
English

STATES

Synaptosomal membrane vesicles have been employed to study the energetics of proline transport and the inhibition of proline transport by unsaturated free fatty acids. Active uptake of proline into synaptosomal membrane vesicles requires extravesicular Na<sup>+</sup> and is primarily driven by a Na<sup>+</sup> gradient created by diluting K<sup>+</sup>-loaded vesicles into Na<sup>+</sup>-containing buffers. Uptake of proline under these conditions is enhanced up to 2-fold by a valinomycin-induced diffusion potential (interior negative). Proline transport is reduced in the absence of external Cl<sup>-</sup> or internal K<sup>+</sup>. Strong (40-90%) inhibition of proline uptake occurs upon collapse of the Na<sup>+</sup> gradient by ionophores such as gramicidin D or activation of the action potential Na<sup>+</sup> channel by veratridine or Tityus serrulatus venom. Less (15-25%) inhibition is obtained with the proton ionophore carbonyl cyanide m-chlorophenylhydrazone, which also prevents the stimulation of proline uptake by the valinomycin-induced diffusion potential. Unsaturated free fatty acids inhibit proline uptake. The inhibition is greatest for arachidonic acid and was somewhat less for oleic acid. The saturated fatty acids palmitic and stearic have little or no inhibitory capacity. Endogenous unsaturated free fatty acids may exert similar inhibitory effects on the reuptake systems for neuroactive amino acids and thus modulate their action in the central nervous system.

**CHECK TAG(S)-** Animal; Support, U.S. Gov't, P.H.S.  
**MEDICAL DESCRIPTOR(S)-** \*Cerebral Cortex --ME; \*Fatty Acids, Nonesterified --PD; \*Intracellular Membranes --ME; \*Proline --ME; \*Synaptosomes --ME Biological Transport --DE; Intracellular Membranes --DE; Kinetics; Membrane Potentials --DE; Rats; Rats, Inbred Strains; Synaptosomes --DE; Valinomycin --PD; Veratridine --PD  
**CAS REGISTRY/EC NUMBER(S)-** \*0; \*147-85-3; \*2001-95-8; \*71-62-5  
**CAS SUBSTANCE NAME(S)-** Fatty Acids, Nonesterified; Proline; Valinomycin; Veratridine

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**103. The effects of chlorpromazine and phenobarbital on vasculogenesis in the cerebellar cortex.**

MED 83-02 83044306 NDN- 008-0032-7657-3

Hannah, R. S.; Roth, S. H.; Spira, A. W.

**JOURNAL** NAME- Acta Neuropathol (Berl)

**VOL.** 57

**NO.** 4

1982

**PP.** 306-8

**DOCUMENT** TYPE- JOURNAL ARTICLE

**JOURNAL** CODE- 1CE

<b>JOURNAL</b>	<b>SUBSET-</b>	MEDJSM
<b>ISSN-</b>	0001-6322	
<b>PUBLICATION</b>	<b>COUNTRY-</b>	WEST
<b>LANGUAGE-</b>	GERMANY, English	

The morphological effects of two chemically different **neuroactive** drugs (chlorpromazine and phenobarbital) on vasculogenesis in rat cerebellum were examined to determine the presence of vascular alterations. Therapeutic dosages of both drugs were chronically administered to separate groups of maternal rats beginning on days 10, 13, 15, 18, and 21. In chlorpromazine-treated animals the specific length of blood vessels was most severely reduced in the Purkinje cell layer. Animals treated with phenobarbital demonstrated an initial reduction in specific length in the Purkinje cell layer but returned to control values by day 21 postnatal (p.n.). Blood vessels in the molecular and granular layers showed little change. The observed changes have been discussed in relation to possible mechanisms and their relationship to neurogenesis.

<b>CHECK</b>	<b>TAG(S)-</b>	Animal;	Female
<b>MEDICAL DESCRIPTOR(S)-</b> *Blood Vessels --DE; *Cerebellar Cortex --BS;			
*Chlorpromazine --PD; *Phenobarbital --PD Maternal-Fetal Exchange; Pregnancy;			
Rats;	Time	Factors	
<b>CAS</b>	<b>REGISTRY/EC</b>	<b>NUMBER(S)-</b>	*50-06-6; *50-53-3
<b>CAS SUBSTANCE NAME(S)-</b> Phenobarbital; Chlorpromazine .			

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**104. The effects of chlorpromazine and phenobarbital on cerebellar Purkinje cells.**

MED	83-02	83041964 NDN-	008-0032-6491-1
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Hannah, R.	S.;	Roth, S.	H.;	Spira, A.	W.
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<b>JOURNAL</b>	<b>NAME-</b>	Teratology	
<b>VOL.</b>	26		
<b>NO.</b>	1		
1982	Aug		
<b>PP.</b>	21-5		
<b>DOCUMENT</b>	<b>TYPE-</b>	JOURNAL	ARTICLE
<b>JOURNAL</b>	<b>CODE-</b>	VM8	
<b>JOURNAL</b>	<b>SUBSET-</b>	MEDJSM	
<b>ISSN-</b>	0040-3709		
<b>PUBLICATION</b>	<b>COUNTRY-</b>	UNITED	STATES
<b>LANGUAGE-</b>	English		

The morphological effects of two chemically different **neuroactive** drugs (chlorpromazine and phenobarbital) on developing Purkinje cells in the rat cerebellum were examined to determine the presence of cytological alterations. Therapeutic dosages of both drugs were

chronically administered to separate groups of maternal rats beginning on day 18 postcoitus. Entire litters were sacrificed on postnatal days 13, 15, 18, and 21. Light microscopic quantitation of Purkinje cells demonstrated a statistically significant reduction in total numbers below control levels at all ages examined for both drugs. Pyknotic Purkinje cells, which appeared more numerous in the drug tested groups, had a paucity of synaptic contacts on both the soma and dendritic branches. Both drugs tested produced similar results within the parameters examined. These alterations have been discussed in relation to possible mechanisms and sites of action.

**CHECK TAG(S)-** Animal; Female; Support, Non-U.S. Gov't  
**MEDICAL DESCRIPTOR(S)-** \*Chlorpromazine --AE; \*Phenobarbital --AE; \*Purkinje Cells --DE Cell Count; Fetus --DE; Pregnancy; Purkinje Cells --UL; Rats  
**CAS REGISTRY/EC NUMBER(S)-** \*50-06-6; \*50-53-3  
**CAS SUBSTANCE NAME(S)-** Phenobarbital; Chlorpromazine .

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105.	Bladder	retraining	of	paraplegic	women.			
MED	82-12		82283205	NDN-	008-0030-7911-1			
Merritt,	J.	L.;	Lie,	M.	R.;	Opitz,	J.	L.
JOURNAL	NAME-	Arch	Phys	Med	Rehabil			
VOL.		63						
NO.		9						
1982		Sep						
PP.		416-8						
DOCUMENT	TYPE-	JOURNAL	ARTICLE					
JOURNAL	CODE-		8BK					
JOURNAL	SUBSET-	MEDJSA;	MEDJSM					
ISSN-		0003-9993						
PUBLICATION	COUNTRY-	UNITED	STATES					
LANGUAGE-		English						

Forty-six women with neurogenic bladder dysfunctions attempted bladder retraining. Thirty-one (67%) were successful in reducing residual urine volume to less than 150ml an incontinence to nonsignificant amounts. Success was not dependent upon age, duration of previous indwelling catheterization, type of neurogenic bladder dysfunction, previous incontinence grades, bladder capacity, peak intraurethral pressure, or use of ~~neuroactive~~ drug, but was inversely correlated with the number of urinary tract infections occurring during bladder retraining (p less than 0.05).

**CHECK TAG(S)-** Female; Human  
**MEDICAL DESCRIPTOR(S)-** \*Bladder, Neurogenic --RH; \*Paraplegia --CO;

\*Urination Disorders --TH Adolescence; Adult; Aged; Middle Age; Urinary Incontinence --PC; Urination Disorders --ET .

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**106. Effect of **neuroactive** material on neurosecretion in adult cockroach.**  
**Periplaneta americana (L).**

<b>MED</b>	<b>82-11</b>	<b>82252466 NDN-</b>	<b>008-0029-5925-5</b>		
<b>Apale,</b>	<b>V.</b>	<b>B.;</b>	<b>Belsare,</b>	<b>D.</b>	<b>K.</b>
<b>JOURNAL</b>	<b>NAME-</b>	<b>Z</b>	<b>Mikrosk</b>	<b>Anat</b>	<b>Forsch</b>
<b>VOL.</b>			<b>96</b>		
<b>NO.</b>			<b>1</b>		
1982					
<b>PP.</b>			<b>54-64</b>		
<b>DOCUMENT</b>	<b>TYPE-</b>		<b>JOURNAL</b>	<b>ARTICLE</b>	
<b>JOURNAL</b>		<b>CODE-</b>		<b>XYA</b>	
<b>JOURNAL</b>		<b>SUBSET-</b>		<b>MEDJSIM</b>	
<b>ISSN-</b>			<b>0044-3107</b>		
<b>PUBLICATION</b>	<b>COUNTRY-</b>		<b>GERMANY,</b>	<b>EAST</b>	
<b>LANGUAGE-</b>			<b>English</b>		

The neurosecretory material is found depleted in the medial neurosecretory cells in adult cockroaches poisoned with insecticide. It is, however, scanty in the neurosecretory pathway but abundant in the corpora cardiaca of these insects. The administration of toxicated haemolymph in the normal cockroach results in scanty material in medial neurosecretory cells, but the accumulation of the neurosecretory material in corpora cardiaca. The toxicated tissue extracts have also caused depletion of neurosecretory material from the medial neurosecretory cells as well as from the axonal tract and its accumulation in the corpora cardiaca. Thus effect is comparatively more pronounced by the extract from the Malpighian tubules and nerve cord than than of brain extract. Thus the effect produced by insecticide on the stimulation--secretion coupling mechanism of neurosecretion is comparable to the produced by the toxicated haemolymph and tissue extract. The possibility of involvement of the adrenergic system in regulating the action of **neuroactive** material on neurosecretory cells is suggested in the insects.

**CHECK TAG(S)-** Animal; Support, Non-U.S. Gov't  
**MEDICAL DESCRIPTOR(S)-** \*Cockroaches --PH; \*Neurosecretion; \*Neurosecretory Systems --PH Fenitrothion --PD; Hemolymph --PH; Neurosecretory Systems --CY; Neurosecretory Systems --DE; Paralysis --PP  
**CAS REGISTRY/EC** **NUMBER(S)-** \*122-14-5  
**CAS SUBSTANCE NAME(S)-** Fenitrothion .

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**107. Standardization vs. normalization in the power spectral analysis of the EEG signal.**

MED 82-04 82068834 NDN- 008-0021-0278-2

Balestra, V.; Balzani, P.; Cabri, M.; Padovan, C.; Sannita, W. G.

<b>JOURNAL</b>	<b>NAME-</b>	Boll	Soc	Ital	Biol	Sper
<b>VOL.</b>			57			
<b>NO.</b>			17			
1981	Sep			15		
<b>PP.</b>			1823-9			
<b>DOCUMENT</b>	<b>TYPE-</b>		JOURNAL		ARTICLE	
<b>JOURNAL</b>	<b>CODE-</b>			ALS		
<b>JOURNAL</b>	<b>SUBSET-</b>			MEDJSIM		
<b>ISSN-</b>			0037-8771			
<b>PUBLICATION</b>	<b>COUNTRY-</b>			ITALY		
<b>LANGUAGE-</b>			English			

Data from power analysis of the human EEG were processed statistically, and an area within the power spectrum was identified, limited by the abscissa and by an exponential curve, the parameters of which could be defined by a moving linear regression after logarithmic transform of the spectral data. The EEG signal of normal subjects and epileptics with borderline EEG tracings was studied before and after administration of neuroactive compounds. The exponential curve was found to be negative in all subjects; its parameters were symmetrical and were not modified by the drugs administered, though these were active on the spectral profile. The area limited by the curve was used as a reference for the standardization of the power values with respect to a constant to the signal. The method allowed a better definition of the spectral profile than it is obtained by normalization vs. the total power value.

**CHECK** TAG(S)- Human  
**MEDICAL DESCRIPTOR(S)-** \*Cerebral Cortex --PP; \*Electroencephalography --MT;  
\*Epilepsy --PP Adult; Child

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**108. On the specificity of 125-I-alpha-bungarotoxin binding to axonal membranes.**

MED 81-12 81266292 NDN- 008-0017-1784-7

Jumblatt, J. E.; Marquis, J. K.; Mautner, H. G.

<b>JOURNAL</b>	<b>NAME-</b>	J	Neurochem
<b>VOL.</b>		37	
<b>NO.</b>		2	

1981		Aug	
PP.		392-400	
DOCUMENT	TYPE-	JOURNAL	ARTICLE
JOURNAL	CODE-		JAV
JOURNAL	SUBSET-		MEDJSM
ISSN-		0022-3042	
PUBLICATION	COUNTRY-	UNITED	STATES
LANGUAGE-		English	

125I-alpha-Bungarotoxin (alpha-BGT) was used to characterize the binding sites for cholinergic ligands in lobster walking leg nerve membranes. The toxin binding component has been visualized histochemically on the external surfaces of intact axons and isolated axonal membrane fragments. Binding of alpha-BGT to nerve membrane preparations was demonstrated to be saturable and highly reversible (KappD congruent to  $1.7 \pm 0.32 \times 10(-7)$  M; Bmax congruent to  $249 \pm 46$  pmol/mg protein) at pH 7.8, 10 mM-Tris buffer. Binding showed a marked sensitivity to ionic strength that was attributable to the competitive effects of inorganic cations (particularly Ca<sup>2+</sup> and Mg<sup>2+</sup>) in the medium. 125I-alpha-BGT binding could be inhibited by cholinergic drugs (atropine congruent to d-tubocurarine greater than nicotine greater than carbamylcholine congruent to choline) and local anesthetics (procaine greater than tetracaine congruent to lidocaine), but was unaffected by other **neuroactive** compounds tested (e.g., tetrodotoxin, 4-aminopyridine, quinuclidinyl benzilate, octopamine, bicuculline, haloperidol, ouabain). The pharmacological sensitivity of toxin binding resembles that of nicotine binding to axonal membranes, but differs significantly from nicotinic cholinergic receptors described in neuromuscular junctions, fish electric organs, sympathetic ganglia, and the CNS. The possible physiological relevance of the axonal cholinergic binding component and its relationship to alpha-BGT binding sites in other tissues are discussed.

**CHECK TAG(S)-** Animal; Support, U.S. Gov't, Non-P.H.S.  
**MEDICAL DESCRIPTOR(S)-** \*Axons --ME; \*Bungarotoxins --ME; \*Receptors, Cholinergic --ME Binding, Competitive; Cell Membrane --ME; Electric Organ --ME; Fishes; Kinetics; Lobsters; Molecular Weight; Neurons --ME; Receptors, Cholinergic --IP

**CAS REGISTRY/EC NUMBER(S)-** \*0; \*0; \*0; \*77097-81-5

**CAS SUBSTANCE NAME(S)-** alpha-bungarotoxin receptor; Bungarotoxins; Receptors, Cholinergic; iodo-alpha-bungarotoxin

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**109. **Neuroactive** properties of some phosphonic analogues of natural guanido compounds.**

MED 81-06 81115337 NDN- 008-0010-3846-4

de Tinguy-Moreaud, E.; Bioulac, B.; Vincent, J. D.; Neuzil, E.

<b>JOURNAL</b>	<b>NAME-</b>	Gen	Pharmacol
<b>VOL.</b>		11	
<b>NO.</b>		6	
1980			
<b>PP.</b>		513-9	
<b>DOCUMENT</b>	<b>TYPE-</b>	JOURNAL	ARTICLE
<b>JOURNAL</b>	<b>CODE-</b>		FLK
<b>JOURNAL</b>	<b>SUBSET-</b>		MEDJSM
<b>ISSN-</b>		0306-3623	
<b>PUBLICATION</b>	<b>COUNTRY-</b>		ENGLAND
<b>LANGUAGE-</b>		English	

NO-ABSTRACT

**CHECK TAG(S)-** Animal; Male; Support, Non-U.S. Gov't  
**MEDICAL DESCRIPTOR(S)-** \*Brain --DE; \*Guanidines --PD; \*Neurons --DE  
 Amino Acids --ME; Binding Sites; Brain --ME; Brain --PH; Rats; Structure-Activity  
 Relationship  
**CAS REGISTRY/EC NUMBER(S)-** \*0; \*0; \*55215-14-0; \*55215-15-1  
**CAS SUBSTANCE NAME(S)-** Amino Acids; Guanidines; guanidinomethylphosphonic  
 acid; 2-guanidinoethylphosphonic acid

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Citations from MEDLINE(R) DATABASE (1975 TO 1979): ME6

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**110. Neurotransmitters and neuromodulators and their mediation by cyclic nucleotides.**

MED	79-12	79252529 NDN-	027-0125-1087-0
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Siggins,	G.	R.
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<b>JOURNAL</b>	<b>NAME-</b>	Adv	Exp	Med	Biol
<b>VOL.</b>			116		
1979					
<b>PP.</b>		41-64			
97		reference(s)			
<b>DOCUMENT</b>	<b>TYPE-</b>	JOURNAL	ARTICLE;	REVIEW	
<b>JOURNAL</b>	<b>CODE-</b>		2LU		
<b>JOURNAL</b>	<b>SUBSET-</b>		MEDJSM		
<b>ISSN-</b>		0065-2598			
<b>PUBLICATION</b>	<b>COUNTRY-</b>	UNITED		STATES	
<b>LANGUAGE-</b>		English			

An effort has been made here to devise criteria allowing discrimination between neurotransmitters, modulators and mediators. However, after consideration of several technical pitfalls in studies of these criteria, and examination of the properties of two examples of ~~neuroactive~~ agents (norepinephrine and endorphins) often referred to as "modulators", it is still difficult to classify these agents in all cases. Thus, in most central targets where NE-fibers are known to terminate, the synaptic actions of NE appear to have properties of both a neuromodulator and a neurotransmitter. Although much more research needs to be pursued, the opioid peptides may be neuromodulators for some neurons (spinal cord neurons) and neurotransmitters for others (myenteric plexus and spinal cord neurons). It may be that classification of such peptide agonists will need to be done on a cell-by-cell basis, with the endogenous peptides subserving a multi-faceted role in central and peripheral neuronal communication. As more and more endogenous ligands and transmitter-like substances are extracted from brain, it begins to appear that the language of neuronal communication is much richer than originally imagined from responses of spinal neurons to the fast-acting classical neurotransmitters. Indeed, it may evolve that the "deviant" forms of communication or transmission are more the rule than the exception. In the final analysis, each neurotransmitter may possess its own "fingerprint" of holistic actions attesting to the unique individuality of neuron types and their neurotransmitters. Such individualities might be expected to accomplish more sophisticated integrative operations, and hence behaviors, than could simple rapid "yes" or "no" messages.

<b>CHECK</b>	<b>TAG(S)-</b>	<b>Animal</b>
<b>MEDICAL DESCRIPTOR(S)-</b> *Brain --PH; *Cyclic AMP --PH; *Cyclic GMP --PH; *Neurons --PH; *Neurotransmitters --PH Acetylcholine --PH; Adenylate Cyclase --ME; Catecholamines --PH; Cerebellum --PH; Enkephalins --PH; Hippocampus --PH; Locus Coeruleus --PH; Norepinephrine --PH; Receptors, Adrenergic, beta --PH .		

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**111. Drug interactions with nerve membrane components regulating ionic permeability: action of tetrodotoxin, procaine, pentobarbital, and ethanol.**

MED	79-07	79137260 NDN-	027-0124-5663-2
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Strickholm,

A.

<b>JOURNAL</b>	<b>NAME-</b>	<b>Prog</b>	<b>Clin</b>	<b>Biol</b>	<b>Res</b>
<b>VOL.</b>		27			
1979					
<b>PP.</b>		167-78			
<b>DOCUMENT</b>	<b>TYPE-</b>	<b>JOURNAL</b>	<b>ARTICLE</b>		
<b>JOURNAL</b>	<b>CODE-</b>		PZ5		
<b>JOURNAL</b>	<b>SUBSET-</b>		MEDJSM		
<b>ISSN-</b>		0361-7742			
<b>PUBLICATION</b>	<b>COUNTRY-</b>	UNITED	STATES		

**LANGUAGE-**

English

The interaction of **neuroactive** agents with surface membrane ionizable groups which regulate passive ionic permeability in crayfish giant axons was examined. Every ionizable membrane group was found to contribute in various degrees to regulating membranes ionic permeability. However, some membrane ionizable groups have dominant control over specific ions. Thus potassium and sodium passive permeability is predominantly activated by deprotonation of imidazole on protein and the secondary ionization of phosphatidic acid. Chloride permeability appears activated almost entirely by protonation of amino side groups on protein. The conformational state of membrane protein which regulates ionic permeability changed when the axon was potassium depolarized. The effects of tetrodotoxin, ethanol, and the amphipathic molecules procaine and pentobarbital, on the passive ionic conductances were determined. Both procaine and pentobarbital could, when charged, alter specific ionic conductances through their effects on surface double layer potentials although protein conformational changes were also involved. Studies on animals made dependent with ethanol showed an increased passive sodium conductance which further increased following ethanol withdrawal. A physical mechanism for ethanol dependency is suggested. Although the above four agents show differences in how they alter specific ionic conductances of nerve, their common mode of action, at concentrations which block the action potential, is to prevent a normal conformational change in membrane protein from occurring when nerve is depolarized.

**CHECK TAG(S)-** Animal; Human; Support, U.S. Gov't, P.H.S.**MEDICAL DESCRIPTOR(S)-** \*Axons --PH; \*Cell Membrane Permeability --DE; \*Ethanol --PD; \*Pentobarbital --PD; \*Procaine --PD; \*Tetrodotoxin --PD Crayfish; Electric Conductivity; Hydrogen-Ion Concentration; Imidazoles; Membrane Lipids --PH; Membrane Potentials --DE; Membrane Proteins --PH; Potassium --ME; Protein Conformation; Sodium --ME; Substance Withdrawal Syndrome; Substance-Related Disorders .

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**112. Localization of putative transmitters in the hippocampal formation: with a note on the connections to septum and hypothalamus.**

MED 79-05 79085324 NDN- 027-0124-3243-3

Storm-Mathisen, J.

<b>JOURNAL</b>	<b>NAME-</b>	Ciba	Found	Symp
<b>NO.</b>		58		
1977				
<b>PP.</b>		49-86		
<b>DOCUMENT</b>	<b>TYPE-</b>	JOURNAL	ARTICLE	
<b>JOURNAL</b>	<b>CODE-</b>		D7X	
<b>JOURNAL</b>	<b>SUBSET-</b>		MEDJSM	

ISSN-  
PUBLICATION  
LANGUAGE-

0300-5208  
COUNTRY- NETHERLANDS  
English

Biochemical assays on microdissected samples, denervation studies, subcellular fractionation, and light and electron microscopic autoradiography of high affinity uptake have been performed to study the cellular localization of transmitter candidates in the rat hippocampal formation. High affinity uptake of glutamate and aspartate is localized in the terminals of several excitatory systems, such as the entorhino-dentate fibres (perforant path), mossy fibres (from granular cells) and pyramidal cell axons. Thus, in stratum radiatum and oriens of CA1, 85% of glutamate and aspartate uptake and 40% of glutamate and aspartate content are lost after lesions of ipsilateral plus commissural fibres from CA3/CA4. Hippocampal efferents also take up aspartate and glutamate, since these activities are heavily reduced in the lateral septum and mamillary bodies after transection of fimbria and the dorsal fornix. The synthesis (by glutamic acid decarboxylase), content and high affinity uptake of gamma-aminobutyrate (GABA) are not reduced after lesions of these or other projection fibre systems. A localization in intrinsic neurons is confirmed by a selective loss of glutamic acid decarboxylase after local injections of kainic acid. Peak concentrations of the enzyme occur near the pyramidal and granular cell bodies, corresponding to the site of the inhibitory basket cell terminals, and in the outer parts of the molecular layers. Some 85% of glutamic acid decarboxylase is situated in 'nerve ending particles'. Acetylcholine synthesis (by choline acetyltransferase) disappears after lesions of septo-hippocampal fibres. Since 80% of the hippocampal choline acetyltransferase is in 'nerve ending particles', the characteristic topographical distribution of this enzyme should reflect the distribution of cholinergic septo-hippocampal afferents. Serotonin, noradrenaline, dopamine and histamine are located/synthesized in afferent fibre systems. Some monoamine-containing afferents to the hippocampal formation pass via the septal area, others via the amygdala. The hippocampal formation also contains nerve elements reacting with antibodies against **neuroactive** peptides, such as enkephalin, substance P, somatostatin and gastrin/cholecystokinin.

CHECK	TAG(S)-	Animal
<b>MEDICAL DESCRIPTOR(S)-</b>	*Hippocampus --EN; *Neurotransmitters --ME; *Septum Pellucidum --EN Acetylcholine --ME; Acetylcholinesterase --ME; Choline O-Acetyltransferase --ME; Dopamine --ME; Glutamates --ME; GABA --ME; Histamine --ME; Neural Inhibition; Neural Pathways --EN; Norepinephrine --ME; Peptides --ME; Raphe Nuclei --EN; Receptors, Neurotransmitter --ME; Serotonin --ME; Tryptophan Hydroxylase --ME .	

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De

Robertis,

E.

**JOURNAL NAME-** In: Mano EB, ed. Proceedings of the International Symposium on Macromolecules, Rio de Janeiro, 1974. Amsterdam, Elsevier, 1975. QU 55 I643p 1974.

<b>DOCUMENT</b>	<b>TYPE-</b>	MONOGRAPH
<b>JOURNAL</b>	<b>CODE-</b>	IDM
<b>PUBLICATION</b>	<b>COUNTRY-</b>	UNITED STATES
<b>LANGUAGE-</b>		English

Receptor proteins for **neuroactive** drugs are strongly hydrophobic and bound to lipids (i.e. proteolipids). They may be isolated either by organic solvents or by detergents. In our laboratory conventional chromatography in an organophilic gel has been used for the isolation of receptor proteins to cholinergic drugs, adrenergic agents, indolamines and the amino acids glutamate and gamma-aminobutyrate. Receptor proteins have been isolated from brain, electric tissue, skeletal muscle, smooth muscle, heart and crustacean muscle. Recently affinity chromatography has been used in a non-polar system to further purify cholinergic and adrenergic receptors. Purifications up to 15,000 fold with high recovery were obtained. Drug-receptor interactions have been studied by light scattering, polarization of fluorescence, electron microscopy and X-ray diffraction. Several cholinergic proteins become organized into para-crystalline arrays upon interaction with the specific ligand. The conducting mechanism (ionophore) associated with the receptor has been studied in artificial membranes with incorporation of the cholinergic receptor from electric tissue and with adrenergic receptor proteins. In both cases the membranes became excitable to the specific ligand. A model of the possible molecular organization of receptor proteins within the cell membrane is presented.

**CHECK**

**TAG(S)-**

Animal

**MEDICAL DESCRIPTOR(S)-** \*Proteins --IP; \*Receptors, Adrenergic; \*Receptors, Cholinergic Acetylcholine; Cell Membrane --UL; Electric Conductivity; Electric Organ --AN; Electrophorus; Ionophores; Membranes, Artificial; Microscopy, Electron; Models, Biological; Molecular Weight; Muscles --AN; Protein Conformation; Stereoisomerism; Synaptic Membranes; X-Ray Diffraction .

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114. Schizophrenia and **neuroactive** peptides from food "letter"  
MED 79-09 79177179 NDN- 027-0115-5112-8

Dohan,

F.

C.

**JOURNAL**

**NAME-**

Lancet

**VOL.**

1

**NO.**

8124

1979

May

12

PP. 1031  
 DOCUMENT TYPE- LETTER  
 JOURNAL CODE- LOS  
 JOURNAL SUBSET- MEDJSA; MEDJSM  
 ISSN- 0140-6736  
 PUBLICATION COUNTRY- ENGLAND  
 LANGUAGE- English

NO-ABSTRACT

CHECK TAG(S)- Human  
 MEDICAL DESCRIPTOR(S)- \*Cereals; \*Peptides --GE; \*Schizophrenia --GE  
 Genotype; Phenotype .

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**115. Proceedings: Dissociation between the tonic and the phasic events during REM sleep by the administration of some **neuro-active** drugs (Discussion 2).**  
 MED 76-03 76043441 NDN- 027-0112-3884-0

Hata, H.

JOURNAL	NAME-	Electroencephalogr	Clin	Neurophysiol
VOL.		39		
NO.		5		
1975		Nov		
PP.		543		
DOCUMENT	TYPE-	JOURNAL	ARTICLE	
JOURNAL	CODE-		EEH	
JOURNAL	SUBSET-		MEDJSM	
ISSN-		0013-4694		
PUBLICATION	COUNTRY-		NETHERLANDS	
LANGUAGE-		English		

NO-ABSTRACT

CHECK TAG(S)- Human  
 MEDICAL DESCRIPTOR(S)- \*Amobarbital --PD; \*Chlorpromazine --PD;  
 \*Imipramine --PD; \*Nitrazepam --PD; \*Sleep, REM --DE .

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**116. Content of **neuroactive** amino acids in the hypothalamus and liver of rats in experimental stomach ulcer and their changes under the effect of cholinolytic**

**drugs"**  
 MED 76-10 76227717 NDN- 027-0108-5313-7  
 Mirzoian, S. A.; Tatevosian, A. T.  
**JOURNAL** NAME- Zh Eksp Klin Med  
**VOL.** 15  
**NO.** 5  
 1975  
**PP.** 6-10  
**DOCUMENT** TYPE- JOURNAL ARTICLE  
**JOURNAL** CODE- Y9J  
**ISSN-** 0044-4510  
**PUBLICATION** COUNTRY- USSR  
**LANGUAGE-** Russian

NO-ABSTRACT

**CHECK** TAG(S)- Animal  
**MEDICAL DESCRIPTOR(S)-** \*Amino Acids, Diamino --ME; \*Aminobutyric Acids --ME; \*Ammonium Compounds --PD; \*Diethylamines --PD; \*Ganglionic Blockers --PD; \*GABA --ME; \*Hypothalamus --ME; \*Liver --ME; \*Stomach Ulcer --ME Ammonium Compounds --TU; Diethylamines --TU; Ganglionic Blockers --TU; Rats; Stomach Ulcer --DT

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**117. A survey of the prescribing and administration of drugs in a long-term care institution for the elderly.**

MED 75-11 75190291 NDN- 027-0107-5356-8  
 Ingman, S. R.; Lawson, I. R.; Pierpaoli, P. G.; Blake, P.  
**JOURNAL** NAME- J Am Geriatr Soc  
**VOL.** 23  
**NO.** 7  
 1975 Jul  
**PP.** 309-16  
**DOCUMENT** TYPE- JOURNAL ARTICLE  
**JOURNAL** CODE- H6V  
**JOURNAL** SUBSET- MEDJSM  
**ISSN-** 0002-8614  
**PUBLICATION** COUNTRY- UNITED STATES  
**LANGUAGE-** English

The prescription and administration of drugs (especially of the **neuroactive** class) was observed in 131 patients in an extended care facility. The average number of **neuroactive** drugs prescribed (2.1) was distinctly different from the average number administered (1.3) because of the large number of pro re nata (prn) prescriptions. More **neuroactive** substances were prescribed for patients with superior mentation and minimal physical disability; the difference between low and high groups was 1.7 (mentation) and 2.8 (physical status). The most common **neuroactive** drugs prescribed were: 1) analgesics, 2) major tranquilizers, and 3) hypnotics. Questionable prescribing practices were demonstrated by the fact that 30 patients had prescriptions for 38 "not-recommended" drugs; 23 of these prescriptions were for propoxyphene compound. After requiring physicians to rewrite drug orders every thirty days, a survey made ten months later showed that there was a decline (0.8) in the number of drugs prescribed per patient and a slight increase (0.45) in the number of drugs administered. Professional drug surveillance is crucial for improving the therapeutic process. At least two modifications of current prescribing practices are recommended: 1) a record should always be made of the precise condition(s) under which a drug prescribed "prn. is to be administered; and 2) a strong effort should be made to reduce the total number of drug prescriptions. The results of this survey suggest that certain procedural matters necessitating change are not in themselves the most substantive factors in improvement. Present "third party" review mechanisms likely will not ameliorate the current situation. It will be necessary to implement complex organizational changes in most extended care facilities.

**CHECK**      **TAG(S)-** Comparative      **Study;**      **Human**  
**MEDICAL DESCRIPTOR(S)-** \*Drug Therapy; \*Long-Term Care; \*Prescriptions, Drug; \*Skilled Nursing Facilities      Aged; Analgesics --TU; Anti-Anxiety Agents --TU; Antidepressive Agents --TU; Antiparkinson Agents --TU; Antipsychotic Agents --TU; Autonomic Agents --TU; Brain --DE; Brain Damage, Chronic --DT; Hypnotics and Sedatives --TU; Mental Processes --DE; Muscle Relaxants, Central --TU; Nervous System --DE; Pharmacology; Stimulation, Chemical

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**118. Physiological properties of vertebrate nerve cells in tissue culture.**  
 MED      76-04      76082304 NDN-      027-0101-8655-8

Dichter,      M.      A.

<b>JOURNAL</b>	<b>NAME-</b>	UCLA	Forum	Med	Sci
NO.			18		
1975					
PP.		101-14			
<b>DOCUMENT</b>	<b>TYPE-</b>	JOURNAL		ARTICLE	
JOURNAL	CODE-			WLQ	
JOURNAL	SUBSET-			MEDJSM	
ISSN-		0082-7134			

<b>PUBLICATION</b>	<b>COUNTRY-</b>	<b>UNITED</b>	<b>STATES</b>
<b>LANGUAGE-</b>		English	

Vertebrate neurons in tissue culture are providing us with a new model system for studying the complex events which occur during neuronal differentiation, synaptogenesis, and neural network formation. It is already apparent that dissociated embryo neurons are capable of differentiating both morphologically and physiologically along predetermined lines in the absence of external influences. These neurons can form new connections with one another but retain some specificity in their selections. Both simple and complex neural networks can be seen. At the present time, the development of the invitro model system is just being explored. The potential value of a system of this kind at a variety of investigative levels should be appreciated. Questions of a fundamental nature in neurobiology, such as how synapses form, what rules govern such interaction, how cells recognize one another, and the nature of the basic two-, three-, or four-cell circuits that comprise the more complex neurons tissue can be approached with this system. Studies of the neurons and synapses themselves can lead to a more basic understanding of vertebrate nervous system functioning. The development of certain pathophysiological processes and the effects of **neuroactive** drugs on vertebrate neurons may be studied at the cellular level. Finally, the basic mechanism of some genetic abnormalities which produce abnormal nervous structure and function may be more easily determined in a simplified in vitro model than in the intact central nervous system. The value of any model is not inherent in the elegance of the model itself, but only in its ability to suggest answers to fundamental questions about the system being modeled. Many fundamental questions about brain mechanisms in mental retardation remain unanswered. Perhaps some day the model of nerve cells in tissue culture will bring us closer to the answers to these questions.

<b>CHECK</b>	<b>TAG(S)-</b>	Animal
<b>MEDICAL DESCRIPTOR(S)-</b>	*Neurons --PH Cerebral Cortex; Chickens; Ganglia, Spinal; Membrane Potentials; Methods; Models, Biological; Rats; Sodium --ME; Spinal Cord; Synaptic Membranes; Synaptic Transmission; Tissue Culture	Calcium --ME; Cells, Cultured;

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**119. YEffects of some **neuro-active** drugs on REM sleep and rapid eye movements during REM sleep in man"**

<b>MED</b>	<b>REM</b>	<b>sleep</b>	<b>in</b>	<b>man"</b>
	75-09		75158856	NDN-

Hata, H. 027-0101-2246-5

<b>JOURNAL</b>	<b>NAME-</b>	Seishin	Shinkeigaku	Zasshi
<b>VOL.</b>		77		
<b>NO.</b>		1		
1975	Jan		25	

PP.		29-52		
DOCUMENT	TYPE-	JOURNAL	ARTICLE	
JOURNAL	CODE-		QAM	
ISSN-		0033-2658		
ITEM	DESCRIPTION-	English	Abstract	
PUBLICATION	COUNTRY-		JAPAN	
LANGUAGE-		Japanese		

NO-ABSTRACT

CHECK	TAG(S)-	Human;	Male	
MEDICAL	DESCRIPTOR(S)-	*Amobarbital --PD; *Chlorpromazine --PD;		
		*Imipramine --PD; *Nitrazepam --PD; *Sleep, REM --DE	Adult	.

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**120. The influence of the nervous system upon adrenal gland weight and assayable pituitary MSH.**

MED	79-05	79094172 NDN-	027-0100-1928-9
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Francis,	M.	G.;	Barnawell,	E.	B.
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JOURNAL	NAME-	Neuroendocrinology		
VOL.		27		
NO.		5-6		
1978				
PP.		228-38		
DOCUMENT	TYPE-	JOURNAL	ARTICLE	
JOURNAL	CODE-		NY8	
JOURNAL	SUBSET-		MEDJSM	
ISSN-		0028-3835		
PUBLICATION	COUNTRY-		SWITZERLAND	
LANGUAGE-		English		

A series of experiments were designed to test the assumption that neuroregulatory mechanisms associated with pituitary ACTH and melanotropin (MSH) secretions are interdependent. Stress elevates both ACTH and MSH activity in mouse pituitaries. There are nervous influences on the secretion of both of these hormones. We have undertaken to stimulate or block various components of the nervous control of these 2 hormones in order to determine whether the 2 are controlled by the same mechanisms or separate ones. We have exposed mice to neurotransmitter blocking agents against serotonin, norepinephrine and epinephrin--parachlorophenylalanine (PCPA), alpha-methyltyrosine (MT), propranolol--both with and without stress. Unilateral adrenalectomy with and without hydrocortisone replacement therapy were investigated. We found that none of the neuro-active substances altered stress elevation of ACTH and MSH. Unilaterally

adrenalectomized stressed animals treated with hydrocortisone showed elevated pituitary MSH levels but non increased ACTH release, as measured by size of the remaining adrenal. Adrenalectomy of animals without replacement therapy showed both elevated pituitary MSH and increased ACTH activity. Since the ACTH and MSH activity behave independently in the last described experiments, we conclude that ACTH and MSH are independently controlled.

**CHECK** TAG(S)- Animal; Male  
**MEDICAL DESCRIPTOR(S)-** \*Fenclonine --PD; \*Methyltyrosines --PD; \*MSH --ME; \*Pituitary Gland --PH; \*Propranolol --PD; \*Stress --PP Adrenal Glands --DE; Adrenal Glands --PH; Adrenalectomy; Hydrocortisone --PD; Organ Weight --DE; Pituitary Gland --DE; Rats .

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**121. A study of psychomotor epilepsy with "kindled. cat preparations.**  
 MED 77-03 77049917 NDN- 027-0098-6896-7

Sato, M.

<b>JOURNAL</b>	<b>NAME-</b>	Folia	Psychiatr	Neurol	Jpn
<b>VOL.</b>		30			
<b>NO.</b>		3			
1976					
<b>PP.</b>		425-34			
<b>DOCUMENT</b>	<b>TYPE-</b>	JOURNAL		ARTICLE	
<b>JOURNAL</b>	<b>CODE-</b>		F3R		
<b>JOURNAL</b>	<b>SUBSET-</b>		MEDJSM		
<b>ISSN-</b>		0015-5721			
<b>PUBLICATION</b>	<b>COUNTRY-</b>		JAPAN		
<b>LANGUAGE-</b>		English			

Seizure development was examined in amygdaloid (AM), hippocampal (HIPP) and septal (SEPT) "KINDLED. CATS BY BEHAVIORAL AND Electrographic methods. hippoc seizure developed into motor seizure after establishing secondary epileptogenesis in AM and globys paliidus. A secondary epileptogenesis in the hippocampus was not necessary for AM seizures to develop into generalized conculsions. The SEPT seizure development was almost identical to the hippocampal seizure development. This latter finding suggests that psychomotor epilepsy may not only ne triggered by the HIPP and AM focus but by the septum and its related structures. In the second experiment, the effect of various **neuroactive** agents on the interictal dischage frequency was studied in AM and HIPP kindled cats. Clear antagonistic action of L-Dopa against reserpine or alpha-MPT induced increase of IID frequency was observed. Viewed in conjunction with our previous assay study of catecholamine that showed a marked depletion of both norepinephrine and dopamine, in hippocampal kindled cat brain, it can be concluded that catecholamine

inhibits the establishment and activation of the kindled epileptic neurocircuits.

**CHECK** TAG(S)- Animal  
**MEDICAL DESCRIPTOR(S)**- \*Epilepsy, Temporal Lobe --PP Amygdaloid Body --PP; Cats; Convulsions --ME; Convulsions --PP; Disease Models, Animal; Dopamine --ME; Electric Stimulation; Electroencephalography; Fenclonine --PD; Hippocampus --PP; Levodopa --PD; Methyltyrosines --PD; Norepinephrine --ME; Reserpine --PD; Septum Pellucidum --PP; Serotonin --ME

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**122. Interaction between microwave and neuroactive compounds. pp. 62-7.**  
MED 78-08 78151881 NDN- 027-0094-8845-9

Galloway, W. D.; Waxler, M.

**JOURNAL NAME**- In: Hazzard DG, ed. Symposium on biological effects and measurement of radio frequency/microwaves. Rockville, Md., DHEW, 1977. WN 610 S9873p 1977.

**DOCUMENT** TYPE- MONOGRAPH  
**JOURNAL** CODE- IDM  
**PUBLICATION** COUNTRY- UNITED STATES  
**LANGUAGE**- English

NO-ABSTRACT

**CHECK** TAG(S)- Animal; Male  
**MEDICAL DESCRIPTOR(S)**- \*Brain Chemistry --RE; \*Microwaves --AE Behavior, Animal --DE; Behavior, Animal --RE; Fenfluramine --PD; Haplorhini; Macaca mulatta

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**123. Jakob-Creutzfeldt disease: analysis of EEG and evoked potentials under basal conditions and neuroactive drugs.**

MED 80-02 80024351 NDN- 027-0092-1160-7

Rossini, P. M.; Caltagirone, C.; David, P.; Macchi, G.

**JOURNAL** NAME- Eur Neurol  
**VOL.** 18  
**NO.** 4  
**1979**  
**PP.** 269-79

DOCUMENT	TYPE-	CLINICAL	TRIAL;	JOURNAL	ARTICLE
JOURNAL		CODE-		ENF	
JOURNAL		SUBSET-		MEDJSIM	
ISSN-			0014-3022		
PUBLICATION		COUNTRY-		SWITZERLAND	
LANGUAGE-				English	

EEG and evoked potential (EP) recordings of a female (aged 70) affected with Jakob-Creutzfeldt disease (JCD) are reported. A comparison of neurophysiological tests under basal conditions and pharmacological stimulation with methylphenidate, diazepam and piracetam was performed. Diazepam and methylphenidate produced a flattening of triphasic complexes and changes in background activity; piracetam did not seem to influence the abnormal brain bioelectrical environment. The authors conclude that EEG and EP abnormalities in JCD can be ascribed to two separate and interacting sources: (1) exaggerated massive excitatory input coming from a deep thalamic pace-maker throughout the diffuse projecting system, and (2) lack of inhibitory intracortical mechanisms.

CHECK	TAG(S)-	Case	Report;	Human
<b>MEDICAL DESCRIPTOR(S)-</b> *Cerebral Cortex --PP; *Creutzfeldt-Jakob Syndrome --DI; *Diazepam --DU; *Methylphenidate --DU; *Piracetam --DU; *Pyrrolidinones --DU				
Aged; Clinical Trials; Creutzfeldt-Jakob Syndrome --PP; Diazepam --AD; Electroencephalography; Evoked Potentials --DE; Injections, Intravenous; Methylphenidate --AD; Piracetam --AD; Placebos				

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**124. The biochemistry of brain development and mental retardation.**  
 MED 78-05 78081489 NDN- 027-0088-3929-7

Davison,	A.	N.		
JOURNAL	NAME-	Br	J	Psychiatry
VOL.		131		
1977		Dec		
PP.		565-74		
61		reference(s)		
DOCUMENT	TYPE-	JOURNAL	ARTICLE;	REVIEW
JOURNAL		CODE-		B1K
JOURNAL		SUBSET-		MEDJSIM
ISSN-			0007-1250	
PUBLICATION		COUNTRY-		ENGLAND
LANGUAGE-			English	

Mental retardation may be associated with a number of environmental factors such as

undernutrition, lead poisoning or exposure to **neuroactive** drugs during a critical period of brain development. Possible biochemical mechanisms operating in these various conditions and in animal models are reviewed in relation to the vulnerable period hypothesis. Small brains are common in the mentally retarded, and this may be related to a developmental abnormality particularly at the level of the synapse.

**CHECK** TAG(S)- Animal; Human  
**MEDICAL DESCRIPTOR(S)-** \*Brain --ME; \*Mental Retardation --ME Age Factors; Brain --CY; Brain --DE; Brain --GD; Cerebral Cortex --PA; Child; Child, Preschool; Hormones --PD; Infant; Infant, Newborn; Lead Poisoning --CO; Mental Retardation --ET; Mental Retardation --PA; Nutrition Disorders --CO; Rats .

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**125. Histocompatibility antigens and effects of **neuroactive** drugs on phytohaemagglutinin stimulation of lymphocytes in vitro.**

MED 77-07 77157369 NDN- 027-0078-4164-8

Bellodi, L.; Smeraldi, R. S.; Negri, F.; Resele, L.; Sacchetti, E.; Smeraldi, E.

<b>JOURNAL</b>	<b>NAME-</b>	Arzneimittelforschung
<b>VOL.</b>		27
<b>NO.</b>		1
1977		
<b>PP.</b>		144-6
<b>DOCUMENT</b>	<b>TYPE-</b>	JOURNAL ARTICLE
<b>JOURNAL</b>	<b>CODE-</b>	91U
<b>JOURNAL</b>	<b>SUBSET-</b>	MEDJSM
<b>ISSN-</b>		0004-4172
<b>PUBLICATION</b>	<b>COUNTRY-</b>	GERMANY, WEST
<b>LANGUAGE-</b>		English

The effects of a psychopharmacological agent, sulpiride, and of some neuromediators, dopamine, norepinephrine and propranolol, on the uptake of  $^3\text{H}$ -thymidine by lymphocytes stimulated in vitro with phytohaemagglutinin (PHA) were studied. The lymphocytes were obtained from two populations of subjects, one with HLA-AL CRAG antigens of the HLA-SD series and one without. We found that the presence of the CRAG antigens in the lymphocytes led in the presence of the various drugs to behaviour different from what was seen when the antigens were not present. When the two groups were pooled, PHA lymphocytes activation was inhibited by dopamine, sulpiride, and propranolol and was not effected by norepinephrine.

**CHECK** TAG(S)- Female; Human; In Vitro; Male  
**MEDICAL DESCRIPTOR(S)-** \*Histocompatibility Antigens; \*HLA Antigens;

\*Lymphocyte Transformation --DE; \*Psychotropic Drugs --PD Cross Reactions; Dopamine --PD; Norepinephrine --PD; Propranolol --PD; Sulpiride --PD

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**126. Study on the reproducibility of human prolactin response to sulpiride, benserazide, insulin hypoglycaemia and arginine infusion.**

MED 79-12 79251943 NDN- 027-0068-9217-0

Pontiroli, A. E.; Gala, R. R.; Pellicciotta, G.; De Pasqua, A.; Girardi, A. M.; Pozza, G.

<b>JOURNAL</b>	<b>NAME-</b>	Acta	Endocrinol	(Copenh)
<b>VOL.</b>		91		
<b>NO.</b>		3		
1979		Jul		
<b>PP.</b>		410-20		
<b>DOCUMENT</b>	<b>TYPE-</b>	JOURNAL	ARTICLE	
<b>JOURNAL</b>	<b>CODE-</b>		0NC	
<b>JOURNAL</b>	<b>SUBSET-</b>		MEDJSM	
<b>ISSN-</b>		0001-5598		
<b>PUBLICATION</b>	<b>COUNTRY-</b>		DENMARK	
<b>LANGUAGE-</b>		English		

In order to evaluate the spontaneous variability of prolactin (PRL) release in response to various stimuli applied repeatedly on different occasions, groups of 5 to 12 subjects each underwent consecutive identical tests with one of the following stimuli applied at 3-6 days' intervals: sulpiride (100 mg im), benserazide (50 mg po), insulin hypoglycaemia (0.1 U/kg b. w. iv) and arginine infusion (25 g iv in 30 min). When repeated in the same subjects, arginine and benserazide yielded superimposable results. In contrast to this, insulin hypoglycaemia yielded significantly lower PRL release, while the PRL response to the second sulpiride test was significantly higher than to the first one. When an interval of 10 days was left between two consecutive sulpiride tests, an identical PRL release was observed. These results indicate that arginine and benserazide are reproducible tests for PRL secretion and it is possible that the decreasing effect of insulin hypoglycaemia on PRL release is due to the stressful effect of the stimulus. Finally, sulpiride probably enhances both PRL release and synthesis thus making greater amounts of PRL available to a subsequent stimulus. Since some of the above stimuli are usual tools for the study of the neuroendocrine control of PRL secretion, our findings suggest that caution appears necessary in attributing to any (neuroactive) drug an effect which might be merely due to a lack of reproducibility of the stimulus employed.

**CHECK** TAG(S)- Female; Human; Male  
**MEDICAL DESCRIPTOR(S)-** \*Arginine --PD; \*Benserazide --PD; \*Hydrazines --PD;  
\*Insulin --PD; \*Prolactin --SE; \*Sulpiride --PD Adult; Evaluation Studies; Middle  
Age; Prolactin --BL

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127. **Neuroactive properties of phosphonic amino acids.**  
MED 79-09 79170636 NDN- 027-0065-5095-6

Bioulac, B.; de Tinguy-Moreaud, E.; Vincent, J. D.; Neuzil, E.

JOURNAL	NAME-	Gen	Pharmacol
VOL.		10	
NO.		2	
1979			
PP.		121-5	
DOCUMENT	TYPE-	JOURNAL	ARTICLE
JOURNAL	CODE-	FLK	
JOURNAL	SUBSET-	MEDJSM	
ISSN-		0306-3623	
PUBLICATION	COUNTRY-	ENGLAND	
LANGUAGE-		English	

NO-ABSTRACT

CHECK TAG(S)- Animal; In Vitro  
**MEDICAL DESCRIPTOR(S)-** \*Amino Acids --PD; \*Cerebellum --DE; \*Cerebral Cortex --DE; \*Neurons --DE Amino Acids --AI; Bicuculline --PD; Cerebellum --CY; Cerebral Cortex --CY; GABA --PD; Phosphorylation; Picrotoxin --PD; Rats .

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128. **Concentration of several neuroactive amino acids in different regions of the brain in experimental hypoparathyroidism**  
MED 78-12 78253170 NDN- 027-0056-5247-2

Khudaverdian,	D.	N.;	Tatevosian,	A.	T.
JOURNAL	NAME-	Zh	Eksp	Klin	Med
VOL.			18		
NO.			2		
1978					
PP.		19-23			
DOCUMENT	TYPE-	JOURNAL	ARTICLE		
JOURNAL	CODE-	Y9J			
ISSN-		0044-4510			
PUBLICATION	COUNTRY-	USSR			
LANGUAGE-		Russian			

NO-ABSTRACT

**CHECK TAG(S)-** Animal; Comparative Study  
**MEDICAL DESCRIPTOR(S)-** \*Amino Acids --AN; \*Central Nervous System --AN;  
 \*Hypoparathyroidism --ME Rats

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**129. YEffect of neuroactive aminoacids on central mechanisms of vascular regulation"**

MED 78-10 78191469 NDN- 027-0053-9902-0

Kovalev, G. V.

<b>JOURNAL</b>	<b>NAME-</b>	Fiziol	Zh	SSSR
<b>VOL.</b>		64		
<b>NO.</b>		5		
1978		May		
<b>PP.</b>		702-10		
<b>DOCUMENT</b>	<b>TYPE-</b>	JOURNAL	ARTICLE	
<b>JOURNAL</b>	<b>CODE-</b>		EX3	
<b>JOURNAL</b>	<b>SUBSET-</b>		MEDJSM	
<b>ISSN-</b>		0015-329X		
<b>ITEM</b>	<b>DESCRIPTION-</b>	English	Abstract	
<b>PUBLICATION</b>	<b>COUNTRY-</b>		USSR	
<b>LANGUAGE-</b>		Russian		

In cats and rats, GABA and glycine depressed pressor vasomotor reactions and responses of sympathetic nerves to stimulation of the medial and vestibular nuclei of the bulbar reticular formation. These drugs depressed vasomotor responses to direct stimulation of the spinal lateral horns. GABA reduced the activated bulbo-spinal influences and inhibition of responses of the "spinal" vessels to stimulation of the solitary tract nucleus and paramedian reticular nuclei. GABA (100-200 mg/kg) depressed vasomotor responses to mechanoreceptor stimulation and increased the responses to chemoreceptor stimulation while glycine did not change them. GABA and glycine exerted no adrenolytic or myotropic effects. GABA did not affect identically the transmission in different sympathetic ganglia. Glycine did not alter the ganglionic transmission. The site and mode of the neuroactive aminoacids effect on the central mechanisms for vasomotor regulation are discussed.

**CHECK TAG(S)-** Animal; Comparative Study  
**MEDICAL DESCRIPTOR(S)-** \*Aminobutyric Acids --PD; \*Glutamates --PD;  
 \*Glycine --PD; \*GABA --PD; \*Vasomotor System --DE Blood Pressure --DE; Brain Mapping; Brain Stem --DE; Cats; Dose-Response Relationship, Drug; Electric

Stimulation; Kidney --IR; Peripheral Nerves --DE; Rats; Reticular Formation --DE; Spinal Cord --DE; Vestibular Nuclei --DE .

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**130. Neuroactive compounds and vertebral teratogenesis in the bird embryo**  
**(author's** *transl)*

MED 78-07 78127179 NDN- 027-0051-4345-0

Meiniel, R.

<b>JOURNAL</b>	<b>NAME-</b>	Experientia	
<b>VOL.</b>		34	
<b>NO.</b>		3	
1978	Mar	15	
<b>PP.</b>		394-6	
<b>DOCUMENT</b>	<b>TYPE-</b>	<b>JOURNAL</b>	<b>ARTICLE</b>
<b>JOURNAL</b>	<b>CODE-</b>		EQZ
<b>JOURNAL</b>	<b>SUBSET-</b>		MEDJSM
<b>ISSN-</b>		0014-4754	
<b>ITEM</b>	<b>DESCRIPTION-</b>	English	Abstract
<b>PUBLICATION</b>	<b>COUNTRY-</b>		SWITZERLAND
<b>LANGUAGE-</b>		French	

Anticholinesterasic and depolarizing (analogues of acetylcholine) agents administered to quail embryos after 3 days of incubation give rise to vertebral fusions in addition to neck deformities. Antagonists of acetylcholine (gallamine and hexamethonium) produce only vertebral joint fusions. The incidence of all these compounds in the vertebral defects by the way of there **neuroactive** properties is proposed.

<b>CHECK</b>	<b>TAG(S)-</b>	Animal
<b>MEDICAL DESCRIPTOR(S)-</b>	*Abnormalities, Drug-Induced --PA; *Cervical Vertebrae --AB; *Cholinesterase Inhibitors --TO; *Quail --EM; *Teratogens Gallamine Triethiodide --TO; Hexamethonium Compounds --TO; Insecticides, Organophosphate --TO; Physostigmine --TO .	

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**131. Studies on the distribution of taurine and other **neuroactive** amino acids in the retina.**

MED 78-04 78064404 NDN- 027-0047-6045-5

Voaden, M. J.; Lake, N.; Marshall, J.; Morjaria, B.

<b>JOURNAL</b>	<b>NAME-</b>	Exp	Eye	Res
<b>VOL.</b>		25		
<b>NO.</b>		3		
1977		Sep		
<b>PP.</b>		249-57		
<b>DOCUMENT</b>	<b>TYPE-</b>	JOURNAL	ARTICLE	
<b>JOURNAL</b>	<b>CODE-</b>		EPL	
<b>JOURNAL</b>	<b>SUBSET-</b>		MEDJSM	
<b>ISSN-</b>		0014-4835		
<b>PUBLICATION</b>	<b>COUNTRY-</b>		ENGLAND	
<b>LANGUAGE-</b>		English		

**NO-ABSTRACT**

**CHECK** TAG(S)- Animal; In Vitro  
**MEDICAL DESCRIPTOR(S)-** \*Amino Acids --ME; \*Retina --ME; \*Taurine --ME  
 Autoradiography; Cats; Guinea Pigs; GABA --ME; Photoreceptors --ME; Pigeons;  
 Pigment Epithelium of Eye --ME; Rabbits; Rats; Synapses --ME .

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132. Time perception and hemodialysis.  
 MED 77-12 77255276 NDN- 027-0044-0639-8

Edwards, A. E.; Kopple, J. D.; Miller, J. M.; Fields, L. G.; Der, D. F.

<b>JOURNAL</b>	<b>NAME-</b>	Nephron
<b>VOL.</b>		19
<b>NO.</b>		3
1977		
<b>PP.</b>		140-5
<b>DOCUMENT</b>	<b>TYPE-</b>	JOURNAL ARTICLE
<b>JOURNAL</b>	<b>CODE-</b>	NW8
<b>JOURNAL</b>	<b>SUBSET-</b>	MEDJSM
<b>ISSN-</b>		0028-2766
<b>PUBLICATION</b>	<b>COUNTRY-</b>	SWITZERLAND
<b>LANGUAGE-</b>		English

Subtle alterations in neurological function are often difficult to identify and even harder to quantitate. The identification of a neurotoxic state existing before overt behavioral changes occur has eluded quantification. It was hypothesized that a challenging signal-detection procedure would be used to assess neurological function of dialysis patients and other subjects, the degree of uremic toxicity occurring during an interdialytic interval, and the effects of **neuroactive** drugs. A vigilance task demanding the detection of an irregularly flashing light from a matrix of regularly flashing lights was administered to 3

groups of 15 men: patients undergoing maintenance hemodialysis, patients with chronic illness and no kidney disease, and healthy subjects. The procedure was found to yield a reliable measure; average test-retest correlation was 0.93, which differentiated not only within the hemodialysis cycle (p less than 0.001), between groups (p less than 0.001), but was also related to the recency of neuroactive drugs ingested (p less than 0.01).

**CHECK TAG(S)**- Comparative Study; Human; Male; Support, U.S. Gov't, Non-P.H.S.; Support, U.S. Gov't, P.H.S.

**MEDICAL DESCRIPTOR(S)**- \*Hemodialysis; \*Kidney Failure, Chronic --TH; \*Time Perception; Arthritis --PP; Education; Kidney Failure, Chronic --PP; Middle Age; Psoriasis --PP; Uremia .

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**133. Net uptake of gamma-aminobutyric acid by a high affinity synaptosomal transport system.**

MED 77-06 77120875 NDN- 027-0038-7865-3

Ryan,	L.	D.;	Roskoski,	R.	Jr
<b>JOURNAL</b>	<b>NAME-</b>	<b>J</b>	Pharmacol	Exp	Ther
<b>VOL.</b>			200		
<b>NO.</b>			2		
1977			Feb		
<b>PP.</b>			285-91		
<b>DOCUMENT</b>	<b>TYPE-</b>		JOURNAL	ARTICLE	
<b>JOURNAL</b>	<b>CODE-</b>			JP3	
<b>JOURNAL</b>	<b>SUBSET-</b>			MEDJSM	
<b>ISSN-</b>			0022-3565		
<b>PUBLICATION</b>	<b>COUNTRY-</b>		UNITED	STATES	
<b>LANGUAGE-</b>			English		

Reuptake of gamma-aminobutyric acid (GABA) by a high affinity transport system in nerve endings in the central nervous system is thought to terminate the action of this postulated neurotransmitter. This hypothesis has been challenged since the demonstration of exchange between synaptosomal and exogenous GABA (G. Levi and M. Raiteri, Nature 250: 735, 1974). In our studies, rat cortical synaptosomes were incubated (25 degrees C) in various media containing 10  $\mu$ M  $^{14}\text{C}$ -GABA. After the synaptosomes were removed by centrifugation,  $^{14}\text{C}$  and total GABA (fluorometric assay) in the resulting supernatant were measured. Uptake of labeled GABA, detected by a decrease in medium radioactivity, is  $\text{Na}^+$ - and  $\text{K}^+$ -dependent. Net GABA uptake, however, does not parallel  $^{14}\text{C}$ -GABA translocation. Exchange accounts for 20 to 70% of radiolabeled GABA accumulation depending upon the experimental conditions. On the other hand, GABA-deficient synaptosomes (prepared by treatment with 56 mM KCl and 1 mM  $\text{CaCl}_2$ ) show equivalent net and radiolabeled GABA uptake in Ringer's solution

containing 1 to 4 mM KCl and 60 to 150 mM NaCl (average 4.6 nmol of GABA accumulated per mg of synaptosomal protein). Net and <sup>14</sup>C-GABA uptake by GABA-deficient synaptosomes are identical at various pH values (6.0-8.5), synaptosomal protein concentrations (0.4-3.5 mg/ml) and temperatures (5-37 degrees C). Although GABA homoexchange may contribute significantly to radiolabel accumulation by synaptosomes containing higher GABA levels (9.5-9.9 nmol/mg), homoexchange is limited in GABA-depleted synaptosomes. Our results are consistent with the proposal that presynaptic GABA capture by a high affinity system in vivo may terminate the action of this neuroactive [REDACTED] amino acid.

**CHECK TAG(S)-** Animal; In Vitro; Male; Support, U.S. Gov't, P.H.S.  
**MEDICAL DESCRIPTOR(S)-** \*Aminobutyric Acids --ME; \*GABA --ME;  
\*Synaptosomes --ME Biological Transport, Active; Cerebral Cortex --ME; Cerebral Cortex --UL; Heat; Rats; Sodium --PD .

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**134. Modification of the actions of some neuroactive drugs by growth hormone.**

MED 76-06 76135204 NDN- 027-0013-2871-6

Tang,	L.	C.;	Cotzias,	G.	C.
<b>JOURNAL</b>		<b>NAME-</b>	Arch		Neurol
<b>VOL.</b>			33		
<b>NO.</b>			2		
1976			Feb		
<b>PP.</b>			131-4		
<b>DOCUMENT</b>		<b>TYPE-</b>	JOURNAL		ARTICLE
<b>JOURNAL</b>		<b>CODE-</b>		80K	
<b>JOURNAL</b>		<b>SUBSET-</b>	MEDJSA;		MEDJSM
ISSN-			0003-9942		
<b>PUBLICATION</b>		<b>COUNTRY-</b>	UNITED		STATES
<b>LANGUAGE-</b>			English		

The flat serum growth hormone (GH) patterns of untreated parkinsonian patients develop diurnal rises during treatment with levodopa. This chronic exposure to excesses of GH might lead to the eventual emergence of the "on-off" phenomenon, which would indicate a need for animal experiments. Pretreatment of mice with GH increased (1) cerebral dopa and dopamine concentrations in levodopa-treated mice, (2) cerebral accumulation of injected tritiated apomorphine and tritiated thymidine, and (3) behavioral responses to levodopa, L-m-tyrosine, apomorphine hydrochloride, and oxotremorine.

**CHECK TAG(S)-** Animal; Male; Support, U.S. Gov't, P.H.S.  
**MEDICAL DESCRIPTOR(S)-** \*Psychotropic Drugs --PD; \*Somatotropin --PD  
Apomorphine --PD; Behavior, Animal --DE; Dopa --PD; Dopamine --PD; Drug

Synergism; Levodopa --PD; Mice; Oxotremorine --PD; Parkinson Disease --DT; Tyrosine --PD .

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**135. Chemical synthesis of N beta-oxalyl-L-alpha, beta-diaminopropionic acid and optical specificity in its neurotoxic action.**

MED 76-04 76062391 NDN- 027-0007-6401-6

Rao, S. L.

JOURNAL	NAME-	Biochemistry		
VOL.	14			
NO.	23			
1975	Nov	18		
PP.	5218-21			
DOCUMENT	TYPE-	JOURNAL ARTICLE		
JOURNAL	CODE-	A0G		
JOURNAL	SUBSET-	MEDJSM		
ISSN-	0006-2960			
LAST PUBLICATION	REVISION	DATE	(VENDOR'S)-	840803
LANGUAGE-	COUNTRY-	UNITED	STATES	
		English		

A practical procedure is described for the bulk synthesis of the neurotoxin N beta-oxalyl-L-alpha, beta-diaminopropionic acid (OA2pr3), a potential dicarboxylic amino acid antagonist of *Lathyrus sativus* seeds. L-Aspartic acid was reacted with sodium azide in 30% fuming sulfuric acid and L-alpha, beta-diaminopropionic acid hydrochloride (A2pr3-HCl) was isolated in yields greater than 75%. Potassium methyl oxalate was found to react selectively with the beta-amino group of S2pr3 resulting in near quantitative yields of OA2pr3. D-OA2pr3 has been made for the first time by this procedure. Unlike L-OA2pr3 the naturally occurring neurotoxin, D-OA2pr3, is not neuroactive even in high doses. The microsynthesis of L- $\bar{\gamma}$ 2,3-3H-A2pr3 from L- $\bar{\gamma}$ 2,3-3H-aspartic acid is also described, and the same procedure could also be used to prepare the neurotoxin with other labels. The availability of the neurotoxin in bulk and in labeled form should further experimental approaches to the understanding of its mechanism of action.

CHECK TAG(S)- Animal  
**MEDICAL DESCRIPTOR(S)-** \*Amino Acids, Diamino --CS; \*Toxins --CS Amino Acids, Diamino --PD; Biological Assay; Chickens; Isomerism; Nervous System --DE; Optical Rotation; Toxins --PD .

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Citations from MEDLINE(R) DATABASE (1966 TO 1974): ME

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**136. Axonal cholinergic binding macromolecule. Response to **neuroactive** drugs.**  
MED 73-04 73060570 NDN- 028-0179-5812-2

Denburg,	J.	L.;	O'Brien,	R.	D.
<b>JOURNAL</b>	<b>NAME-</b>		J	Med	Chem
<b>VOL.</b>			16		
<b>NO.</b>			1		
1973			Jan		
<b>PP.</b>			57-60		
<b>DOCUMENT</b>	<b>TYPE-</b>	JOURNAL		ARTICLE	
<b>JOURNAL</b>	<b>CODE-</b>			JOF	
<b>JOURNAL</b>	<b>SUBSET-</b>			MEDJSM	
<b>ISSN-</b>		0022-2623			
<b>PUBLICATION</b>	<b>COUNTRY-</b>	UNITED		STATES	
<b>LANGUAGE-</b>		English			

NO-ABSTRACT

**CHECK** TAG(S)- Animal; In Vitro  
**MEDICAL DESCRIPTOR(S)-** \*Axons --PH; \*Parasympatholytics --PD Action Potentials --DE; Axonal Transport --DE; Axons --DE; Binding Sites; Binding, Competitive; DDT --PD; Hemicholinium 3 --PD; Imidazoles --PD; Ligands --ME; Lobsters; Macromolecular Systems; Nicotine --ME; Ouabain --PD; Phenobarbital --PD; Procaine --PD; Receptors, Cholinergic --DE; Tetraethylammonium Compounds --PD; Tetrodotoxin --PD; Toxins --PD; Tritium; Veratrine --PD

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**137. Some **neuroactive** compounds in the substantia nigra.**  
MED 75-04 75070657 NDN- 028-0173-8274-1

Krnjevic,		K.	
<b>JOURNAL</b>	<b>NAME-</b>	Adv	Neurol
<b>VOL.</b>		5	
1974			
<b>PP.</b>		145-52	
<b>DOCUMENT</b>	<b>TYPE-</b>	JOURNAL	ARTICLE
<b>JOURNAL</b>	<b>CODE-</b>		2NX
<b>JOURNAL</b>	<b>SUBSET-</b>		MEDJSM

**PUBLICATION  
LANGUAGE-**

**COUNTRY-**

UNITED  
English

STATES

NO-ABSTRACT

**CHECK**

**TAG(S)-**

Animal

**MEDICAL DESCRIPTOR(S)-** \*Aminobutyric Acids --AN; \*Dopamine --AN; \*GABA --AN; \*Substance P --AN; \*Substantia Nigra --AN Cats; Caudate Nucleus --PH; Dopamine --PH; Electrophysiology; GABA --PH; Neural Pathways; Substantia Nigra --PH; Synaptic Transmission .

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138. L-leucine: a **neuroactive** substance in insects.  
MED 72-05 72085409 NDN- 028-0172-3785-6

Tashiro, S.; Taniguchi, E.; Eto, M.

**JOURNAL**

**NAME-**

Science

**VOL.**

175

**NO.**

20

1972

Jan

28

**PP.**

448-9

**DOCUMENT**

**TYPE-**

JOURNAL

ARTICLE

**JOURNAL**

**CODE-**

UJ7

**JOURNAL**

**SUBSET-**

MEDJSM

**ISSN-**

0036-8075

**PUBLICATION**

**COUNTRY-**

UNITED

STATES

**LANGUAGE-**

English

NO-ABSTRACT

**CHECK**

**TAG(S)-**

Animal

**MEDICAL DESCRIPTOR(S)-** \*Leucine --PH; \*Neurotransmitters --PH; \*Spinal Cord --PH Abdomen --IR; Chromatography, Ion Exchange; Chromatography, Paper; Cockroaches; DDT --PD; Isoleucine --BL; Larva --AN; Leucine --BL; Silkworms; Spinal Cord --DE; Tyrosine --BL .

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139. Susceptibility to audiogenic stimuli induced by hyperbaric oxygenation and various **neuroactive** agents.

MED 72-03 72042713 NDN- 028-0172-3052-7

Wada, J. A.; Terao, A.; Scholtmeyer, H.; Trapp, W. G.

JOURNAL	NAME-	Exp	Neurol
VOL.		33	
NO.		1	
1971		Oct	
PP.		123-9	
DOCUMENT	TYPE-	JOURNAL	ARTICLE
JOURNAL	CODE-		EQF
JOURNAL	SUBSET-		MEDJSM
ISSN-		0014-4886	
PUBLICATION	COUNTRY-	UNITED	STATES
LANGUAGE-		English	

NO-ABSTRACT

CHECK	TAG(S)-	Animal;	Male
MEDICAL DESCRIPTOR(S)-		*Atropine --PD; *Convulsions; *Dopa --PD;	
*Hydroxylases --AI; *Hyperbaric Oxygenation; *Neurotransmitters --ME;			
*Physostigmine --PD; *Reserpine --PD; *Sound; *Synaptic Transmission --DE; *5-			
Hydroxytryptophan --PD Atropine --TU; Brain --DE; Convulsions --PC; Dopa --TU;			
Fenclonine --PD; Fenclonine --TU; Physostigmine --TU; Rats; Reserpine --TU; Tyrosine;			
5-Hydroxytryptophan --TU			

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**140. Role of thiamine metabolism in the central nervous system. II. Effects of various agents on thiamine triphosphatase activity in rat brain.**  
MED 75-11 75192606 NDN- 028-0170-3223-7

Iwata, H.; Baba, A.; Matsuda, T.; Terashita, Z.; Ishii, K.

JOURNAL	NAME-	Jpn	J	Pharmacol
VOL.		24		
NO.		6		
1974		Dec		
PP.		825-9		
DOCUMENT	TYPE-	JOURNAL	ARTICLE	
JOURNAL	CODE-		KO7	
JOURNAL	SUBSET-		MEDJSM	
ISSN-		0021-5198		
PUBLICATION	COUNTRY-		JAPAN	
LANGUAGE-		English		

The effects of various agents on the activity of brain thiamine triphosphatase (TTPase) in

vivo and in vitro were studied. Thiamine deficiency caused a significant increase in soluble TTPase activity and a decrease in membrane-associated TTPase activity. Insulin and a fasting state did not affect these enzyme activities. DL-Methamphetamine (10mg/kg i.p.) increased the activity of the soluble TTPase, whereas reserpine (2.5 mg/kg i.p.) caused no change in the enzyme activities. A single injection of chlorpromazine (25 mg/kg s.c.) had no effect on the microsomal or soluble TTPase activities, but repeated injections reduced the activity of the microsomal enzyme. The effects of various **neuroactive** agents on microsomal TTPase activity were examined in vitro. Among the drugs tested, only chlorpromazine caused marked inhibition of the enzyme activity.

**CHECK**      **TAG(S)-**      Animal;      In      Vitro;      Male  
**MEDICAL DESCRIPTOR(S)-** \*Brain --EN; \*Insulin --PD; \*Phosphoric Monoester Hydrolases --ME; \*Thiamine Deficiency --EN      Acetylcholine --PD; Chlorpromazine --PD; Colchicine --PD; Fasting; Liver --EN; Methamphetamine --PD; Microsomes --EN; Norepinephrine --PD; Phenytoin --PD; Phosphoric Acids; Rats; Reserpine --PD; Thiamine; Tyramine --PD

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**141. Changing the actions of **neuroactive** drugs by changing brain protein synthesis.**

MED	75-03	75046807 NDN-	028-0169-9482-9					
Tang, L.	C.;	Cotzias, G.	C.;	Dunn, M.				
<b>JOURNAL</b>	<b>NAME-</b>	Proc	Natl	Acad	Sci	U	S	A
<b>VOL.</b>			71					
<b>NO.</b>				9				
1974				Sep				
<b>PP.</b>			3350-4					
<b>DOCUMENT</b>	<b>TYPE-</b>	JOURNAL			ARTICLE			
<b>JOURNAL</b>	<b>CODE-</b>				PV3			
<b>JOURNAL</b>	<b>SUBSET-</b>				MEDJSM			
<b>ISSN-</b>		0027-8424						
<b>PUBLICATION</b>	<b>COUNTRY-</b>	UNITED			STATES			
<b>LANGUAGE-</b>		English						

NO-ABSTRACT

**CHECK**      **TAG(S)-**      Animal  
**MEDICAL DESCRIPTOR(S)-** \*Behavior, Animal --DE; \*Brain --ME; \*Levodopa --PD; \*Nerve Tissue Proteins --BI      Adenosine Triphosphate --ME; Apomorphine --PD; Caudate Nucleus; Chloramphenicol --PD; Cyclic AMP --BI; Cycloheximide --PD; Depression, Chemical; Dopamine --BI; Levodopa --ME; Mice; Motor Activity --DE;

Oxotremorine --PD; Poly I-C --PD; Puromycin --PD; Receptors, Adrenergic; Receptors, Cholinergic; Stimulation, Chemical .

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**142. Differential responses of free and bound polysomes to inhibitors and neuroactive substances in vitro.**

MED 73-03 73041567 NDN- 028-0167-5052-7

Hemminki, K.

<b>JOURNAL</b>	<b>NAME-</b>	J	Neurochem
<b>VOL.</b>		19	
<b>NO.</b>		11	
1972		Nov	
<b>PP.</b>	2699-702		
<b>DOCUMENT</b>	<b>TYPE-</b>	JOURNAL	ARTICLE
<b>JOURNAL</b>	<b>CODE-</b>	JAV	
<b>JOURNAL</b>	<b>SUBSET-</b>	MEDJSM	
<b>ISSN-</b>	0022-3042		
<b>PUBLICATION</b>	<b>COUNTRY-</b>	ENGLAND	
<b>LANGUAGE-</b>	English		

NO-ABSTRACT

**CHECK TAG(S)-** Animal; In Vitro  
**MEDICAL DESCRIPTOR(S)-** \*Polyribosomes --DE Acetylcholine --PD; Aminobutyric Acids --PD; Butyrates --PD; Cerebral Cortex --CY; Chloramphenicol --PD; Cyclic AMP --PD; Cycloheximide --PD; Fluorides --PD; Leucine --ME; Nerve Tissue Proteins --BI; Norepinephrine --PD; Peptides --AI; Peptides --BI; Polyribosomes - -ME; Protein Binding --DE; Rats; Ribonucleases --PD; Serotonin --PD .

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**143. Biochemical studies on the teratogenic action of Bidrin and other neuroactive agents in developing hen eggs.**

MED 68-12 68397736 NDN- 028-0163-6605-3

Upshall, D. G.; Roger, J. C.; Casida, J. E.

<b>JOURNAL</b>	<b>NAME-</b>	Biochem	Pharmacol
<b>VOL.</b>		17	
<b>NO.</b>		8	
1968		Aug	

PP. 1529-42  
 DOCUMENT JOURNAL ARTICLE  
 JOURNAL CODE- 9Z4  
 JOURNAL SUBSET- MEDJSM  
 ISSN- 0006-2952  
 PUBLICATION COUNTRY- UNITED STATES  
 LANGUAGE- English

NO-ABSTRACT

CHECK TAG(S)- Animal; Female  
**MEDICAL DESCRIPTOR(S)-** \*Abnormalities, Drug-Induced; \*Chick Embryo --DE;  
 \*Cholinesterase Inhibitors --TO; \*Ovum --DE; \*Phosphates --TO; \*Physostigmine --TO  
 Acetates --ME; Acetylcholine --ME; Amides --TO; Ammonium Chloride; Atropine --  
 TO; Betaine; Butyrates --TO; Carbachol --TO; Carbon Isotopes; Choline --ME;  
 Decamethonium Compounds --TO; Hexamethonium Compounds --TO; Nicotine --TO;  
 NAD; Parasympatholytics --TO; Sulfanilamides --TO; Triglycerides --ME; Tubocurarine  
 --TO .

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**144. Hypothalamically induced defensive behavior and various **neuroactive** agents.**  
 MED 74-12 74302475 NDN- 028-0161-6622-2

Sato, M.; Wada, J. A.  
 JOURNAL NAME- J Oral Pathol  
 VOL. 2  
 NO. 6  
 1973  
 PP. 101-6  
 DOCUMENT JOURNAL ARTICLE  
 JOURNAL CODE- JID  
 JOURNAL SUBSET- MEDJSM; MEDJSD  
 ISSN- 0300-9777  
 PUBLICATION COUNTRY- DENMARK  
 LANGUAGE- English

NO-ABSTRACT

CHECK TAG(S)- Animal; Female; Human; Male  
**MEDICAL DESCRIPTOR(S)-** \*Defense Mechanisms; \*Hypothalamus --PH  
 Atropine --PD; Cats; Dopa --PD; Fenclonine --PD; Hypothalamus --DE; Physostigmine -  
 -PD; Reserpine --PD; Tyrosine --PD; 5-Hydroxytryptophan --PD .

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**145. Learned escape behavior induced by brain electrical stimulation and various neuroactive agents.**

MED 72-01 72014907 NDN- 028-0159-7831-2

Wada, J. A.; Matsuda, M.

<b>JOURNAL VOL.</b>	<b>NAME-</b>	Exp	Neurol
NO.		32	
1971		3	
PP.		Sep	
		357-65	
<b>DOCUMENT JOURNAL</b>	<b>TYPE-</b> JOURNAL	ARTICLE	
<b>JOURNAL</b>	<b>CODE-</b> EQF		
<b>JOURNAL</b>	<b>SUBSET-</b> MEDJSM		
<b>ISSN-</b>	0014-4886		
<b>PUBLICATION</b>	<b>COUNTRY-</b> UNITED	STATES	
<b>LANGUAGE-</b>	English		

NO-ABSTRACT

**CHECK TAG(S)-** Animal; Female; Male

**MEDICAL DESCRIPTOR(S)-** \*Escape Reaction; \*Mesencephalon --PH Atropine --PD; Behavior, Animal --DE; Cats; Dopa --PD; Drug Interactions; Electric Stimulation; Escape Reaction --DE; Fenclonine --PD; Hypothalamus --DE; Hypothalamus --PH; Mesencephalon --DE; Methionine Sulfoximine --PD; Methyltyrosines --PD; Physostigmine --PD; Pyridoxine --PD; Reaction Time --DE; Reserpine --PD; 5-Hydroxytryptophan --PD

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**146. ATPase inhibition and electrophysiological change caused by DDT and related neuroactive agents in lobster nerve.**

MED 71-12 71290103 NDN- 028-0159-7392-2

Matsumura, F.; Narahashi, T.

<b>JOURNAL VOL.</b>	<b>NAME-</b> Biochem	Pharmacol	
NO.	20		
1971	4		
PP.	Apr		
	825-37		
<b>DOCUMENT</b>	<b>TYPE-</b> JOURNAL	ARTICLE	

<b>JOURNAL</b>	<b>CODE-</b>	9Z4
<b>JOURNAL</b>	<b>SUBSET-</b>	MEDJSM
<b>ISSN-</b>	0006-2952	
<b>PUBLICATION</b>	<b>COUNTRY-</b>	UNITED
<b>LANGUAGE-</b>		STATES
		English

NO-ABSTRACT

**CHECK** TAG(S)- Animal; In Vitro

**MEDICAL DESCRIPTOR(S)-** \*Action Potentials --DE; \*Adenosinetriphosphatase --AI; \*DDT --PD; \*Neurons --EN Acetic Acids --PD; Calcium Chloride --PD; Cell Membrane --DE; Cell Membrane --EN; Cell Membrane Permeability --DE; Chlorides --PD; Crustacea; Diuretics, Mercurial --PD; DDD --PD; Enzyme Activation; Hydrogen-Ion Concentration; Imidazoles --PD; Kinetics; Magnesium --PD; Morpholines --PD; Neurons --CY; Neurons --DE; Ouabain --PD; Potassium Chloride --PD; Sodium Chloride --PD; Spectrophotometry; Tetraethylammonium Compounds --PD; Tetrodotoxin --PD; Ultracentrifugation; Veratrine --PD

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147. **Neuroactive agents and nerve membrane conductances.**  
 MED 68-10 68314940 NDN- 028-0031-7366-8

Narahashi, T.; Moore, J. W.

<b>JOURNAL</b>	<b>NAME-</b>	J	Gen	Physiol
<b>VOL.</b>		51		
<b>NO.</b>		5		
1968		May		
PP.		Suppl:93S+		
<b>DOCUMENT</b>	<b>TYPE-</b>	JOURNAL	ARTICLE	
<b>JOURNAL</b>	<b>CODE-</b>		I8N	
<b>JOURNAL</b>	<b>SUBSET-</b>		MEDJSM	
<b>ISSN-</b>	0022-1295			
<b>PUBLICATION</b>	<b>COUNTRY-</b>	UNITED	STATES	
<b>LANGUAGE-</b>		English		

NO-ABSTRACT

**CHECK** TAG(S)- Animal

**MEDICAL DESCRIPTOR(S)-** \*DDT --PD; \*Neural Conduction --DE; \*Neurilemma; \*Tetrodotoxin --PD Axons --DE; Membrane Potentials; Neurilemma --PH

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Citations from U.S. Patent Bibliographic Database: PA2

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148.	Regulating	neuropeptide	hormone	secretion
PAT	08-27-96	05550120	NDN-	095-0230-1631-6
INVENTOR(S)-		Jackson,	Meyer	B.
PATENT	APPLICATION	NUMBER-	05550120	
PATENT	FILED-	NUMBER-	415741	
DATE		1995-04-03		
PATENT	DATE-		1996-08-27	
NUMBER	OF	CLAIMS-	10	
EXEMPLARY	CLAIMS-		1	
FIGURES-		10		
ART/GROUP	UNIT-		188	
PATENT	CLASS-	Invention	(utility)	patent
INVENTOR	COUNTRY/ZIPCODE-			53705
ATTORNEY, AGENT, OR FIRM-	Gulbrandsen, Carl E.; Stroud, Stroud, Willink, Thompson & Howard			
U.S.	PATENT	CLASS-	514169000O	
U.S.	CLASSIFICATION	REFS.-	X514177000; X514178000; X514170000	
INTERNATIONAL	PATENT	CLASS-	6A01N04500; A61K03156	
PATENT	REFERENCE(S)-		5110810; 5120723	
PATENT	REFERENCED	BY-	05877169	

Methods are described for regulating neuropeptide secretion to alleviate premature labor, hypertension, fluid imbalance, and risk of heart disease: using neuroactive steroids targeted for a newly-identified site of action in the nerve terminals of neurosecretory neurons. The steroids 17 betaestradiol and dehydroepiandrosterone increase the release of neuropeptide hormones such as oxytocin and vasopressin. Pregnalone derivatives decrease the release of the same hormones.

**EXEMPLARY CLAIMS-** Claim- 1. A method for increasing the release of neuropeptide hormones from the neurosecretory nerve terminals of the posterior pituitary of a patient, said method comprising the step of administering to said patient an effective amount of 17 beta-estradiol, dehydroepiandrosterone or its sulfated derivatives.

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**149. Method for chemical promotion of the effects of low current transcranial electrostimulation**

PAT 01-28-92 05084007 NDN- 095-0178-2900-3

**INVENTOR(S)-** Malin, David H.; Skolnick, Malcolm H.

<b>PATENT</b>	<b>NUMBER-</b>	05084007	
<b>PATENT</b>	<b>APPLICATION</b>	<b>NUMBER-</b>	652876
<b>DATE</b>	<b>FILED-</b>	1991-02-08	
<b>PATENT</b>	<b>DATE-</b>	1992-01-28	
<b>NUMBER</b>	<b>OF</b>	<b>CLAIMS-</b>	27
<b>EXEMPLARY</b>		<b>CLAIMS-</b>	1
<b>FIGURES-</b>		5	
<b>ART/GROUP</b>		<b>UNIT-</b>	336
<b>PATENT</b>	<b>CLASS-</b>	Invention (utility)	patent
<b>INVENTOR</b>	<b>COUNTRY/ZIPCODE-</b>	77062;	77024
<b>ATTORNEY, AGENT, OR FIRM-</b>	Vaden, Eickenroht, Thompson & Boulware		
<b>U.S.</b>	<b>PATENT</b>	<b>CLASS-</b>	604020000O
<b>U.S.</b>	<b>CLASSIFICATION</b>	<b>REFS.-</b>	X128421000
<b>INTERNATIONAL</b>	<b>PATENT</b>	<b>CLASS-</b>	5A61N00130; A61N00100
<b>PATENT</b>	<b>REFERENCE(S)-</b>	4233986; 4294245; 4331145; 4439452; 4509521; 4646744; 4702254; 4724841; 4779044; 4784142; 4844075; 4856526; 4865048	
<b>PATENT REFERENCED BY-</b>	05354320; 06015835; 06109269; 06128537; 06129685; 06251391; 06264944		
<b>FOREIGN DOCUMENT REFERENCE(S)-</b>	1205916; 1279640; 1318236; 1410992; 0000063		
<b>FOREIGN</b>	<b>COUNTRY</b>	<b>CODE-</b>	SUX; SUX; SUX; SUX; WOX

Method of providing relief from painful or stressful stimuli, or remediating imbalances or deficiencies in the **neuroactive** substances that modulate neurohumoral mechanisms, which involves concomitant administration of a **neuroactive** chemical promoter and transcranial electrostimulation. This combination enhances the ability of the central nervous system to provide relief from, for instance, pain, addiction withdrawal, anxiety and depression.

**EXEMPLARY CLAIMS-** Claim- 1. A method of enhancing the relief from painful, stressful, or painful and stressful stimuli provided by transcranial electrostimulation comprising the concomitant administration of a **neuroactive** chemical promoter and transcranial electrostimulation to an animal experiencing a stressful or painful condition.

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**150. Appetite suppression with dopamine-fatty acid conjugates**

PAT	00-00-90	04939174 NDN-	095-0158-7843-6
<b>INVENTOR(S)-</b>		Shashoua, Victor	E.
<b>PATENT NUMBER</b>	<b>APPLICATION NUMBER-</b>	04939174	
<b>PATENT DATE</b>	<b>FILED-</b>	160667	
<b>PATENT DATE-</b>	<b>1988-02-26</b>		
<b>PATENT NUMBER</b>	<b>DATE-</b>	1990-07-03	
<b>EXEMPLARY FIGURES-</b>	<b>OF CLAIMS-</b>	25	
<b>ART/GROUP</b>	<b>CLAIMS-</b>	1	
<b>PATENT</b>	<b>UNIT-</b>	4	
<b>INVENTOR</b>	<b>CLASS-</b>	Invention	(utility) patent
<b>ATTORNEY, U.S.</b>	<b>COUNTRY/ZIPCODE-</b>	02146	
<b>PATENT</b>	<b>AGENT, OR FIRM-</b>	Wolf, Greenfield & Sacks	
<b>U.S. CLASSIFICATION</b>	<b>CLASS-</b>	514549000O	
<b>REFS.-</b>	X514400000; X514415000; X514627000; X548504000; X548507000; X560144000; X564204000; X564207000		
<b>INTERNATIONAL PATENT</b>	<b>CLASS-</b>	5A61K031165; A61K03123	
<b>PATENT REFERENCED BY</b>	05284876; 05545719; 05716614; 05795909; 05919815; 05955459; 05977174; 05994392; 06080877; 06107499; 06153653; 06197764; 06225444; 06258836		
<b>FOREIGN DOCUMENT</b>	<b>REFERENCE(S)-</b>	030009;	091694
<b>FOREIGN COUNTRY</b>	<b>CODE-</b>	EPX;	EPX

The invention involves the formation of a prodrug from a fatty acid carrier and a **neuroactive** drug. The prodrug is stable in the environment of both the stomach and the bloodstream and may be delivered by ingestion. The prodrug passes readily through the blood brain barrier. Once in the central nervous system, the prodrug is hydrolyzed into the fatty acid carrier and the drug to release the drug. ; In a preferred embodiment, the carrier is 4,7,10,13,16,19 docosahexa-enoic acid and the drug is dopamine. Both are normal components of the central nervous system. The covalent bond between the drug and the carrier preferably is an amide bond, which bond may survive the conditions in the stomach. Thus, the prodrug may be ingested and will not be hydrolyzed completely into the carrier molecule and drug molecule in the stomach.

**EXEMPLARY CLAIMS-** Claim- 1. A method for suppressing appetite in a patient comprising, introducing into the patient a prodrug comprising a fatty acid coupled to dopamine.

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151. Fatty acid-neuroactive drug conjugate as a prodrug  
 PAT 00-00-90 04933324 NDN- 095-0158-2004-5

INVENTOR(S)-	Shashoua,	Victor	E.
PATENT NUMBER-	04933324		
PATENT APPLICATION NUMBER-	315134		
DATE FILED-	1989-02-24		
PATENT DATE-	1990-06-12		
NUMBER OF CLAIMS-	48		
EXEMPLARY FIGURES-	CLAIMS-	1	
	4		
ART/GROUP	UNIT-	121	
PATENT CLASS-	Invention	(utility)	patent
INVENTOR COUNTRY/ZIPCODE-	02146		
ATTORNEY, AGENT, OR FIRM-	Wolf, Greenfield & Sacks		
U.S. PATENT CLASS-	514017000O		
U.S. CLASSIFICATION	REFS.-	X514284000; X514400000; X514415000; X514549000; X514627000; X530302000; X530323000; X546075000; X548338100; X548504000; X548507000; X560144000; X564204000; X564207000	
INTERNATIONAL PATENT CLASS-	5A61K03702; A61K03144; C07C10352; C07D22118		
PATENT REFERENCED BY-	05284876; 05298491; 05545719; 05716614; 05795909; 05919815; 05994392; 06051576; 06080877; 06107499; 06117454; 06172043; 06197764; 06225444; 06258836		

The invention involves the formation of a prodrug from a fatty acid carrier and a ~~neuroactive~~ drug. The prodrug is stable in the environment of both the stomach and the bloodstream and may be delivered by ingestion. The prodrug passes readily through the blood brain barrier. Once in the central nervous system, the prodrug is hydrolyzed into the fatty acid carrier and the drug to release the drug. ; In a preferred embodiment, the carrier is 4, 7, 10, 13, 16, 19 docosahexa-enoic acid and the drug is dopamine. Both are normal components of the central nervous system. The covalent bond between the drug and the carrier preferably is an amide bond, which bond may survive the conditions in the stomach. Thus, the prodrug may be digested and will not be hydrolyzed completely into the carrier molecule and drug molecule in the stomach.

**EXEMPLARY CLAIMS-** Claim- 1. A prodrug compound capable of facilitating the passage of drug across the blood-brain barrier comprising: ? CH sub 3(CH sub 2CHCH) sub 6CH sub 2CH sub 2OCD? ; wherein D is a ~~nueroactive~~ drug selected from the group consisting of dopamine, serotonin, gamma L/C -aminobutyric acid, norepinephrine, apomorphine, histamine, epinephrine, glycine, aspartic acid, glutamic acid, taurine, phefluoramine, amphetamine, met-enkephalin, and diethylpropion.

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